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Thirteenth Annual Edition

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United States-German Economic Yearbook 1987

Deutsch-Amerikanisches Wirtschaftsjahrbuch

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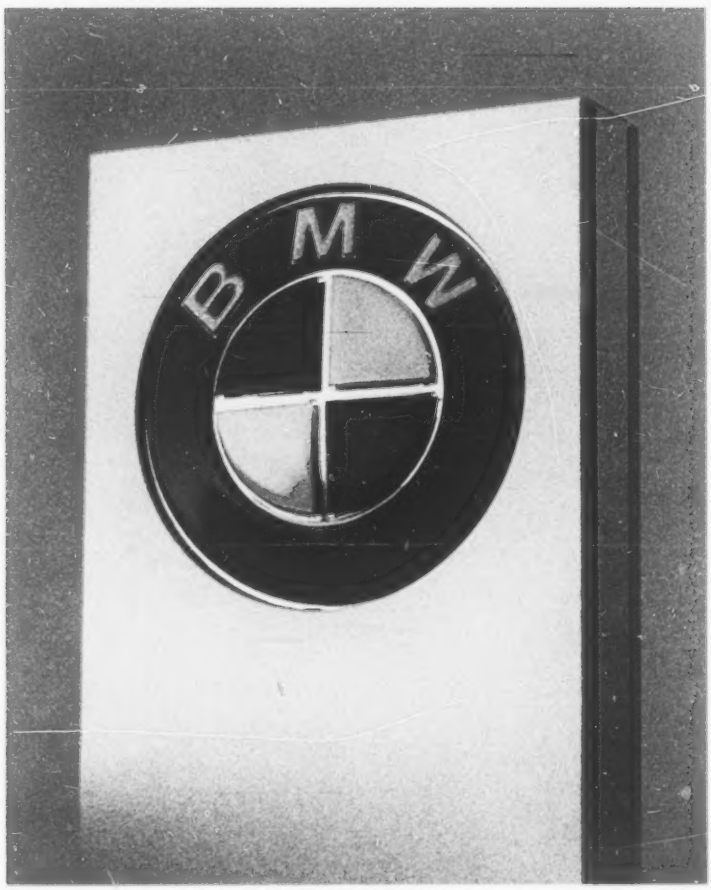

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PUBLISHER
German American
Chamber of Commerce, Inc.
666 Fifth Avenue
New York, N.Y. 10103
Telephone: (212) 974-8830

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PRODUCTION
Manhattan Publishing Company
(Division of
U.S. & World Publications, Inc.)
Croton-on-Hudson, N.Y.

ADVERTISING SALES
Manhattan Publishing Co.
One Croton Point Ave.
P.O. Box 650
Croton-on-Hudson, N.Y. 10520
Telephone: (914) 271-5194

represented in the Federal Republic by
Bohn International AG
Mittlerer Reisberg 20
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3250 Wilshire Blvd. Suite 1112
Los Angeles, CA 90010

Printed in the United States

ISBN 0-96640-026-5

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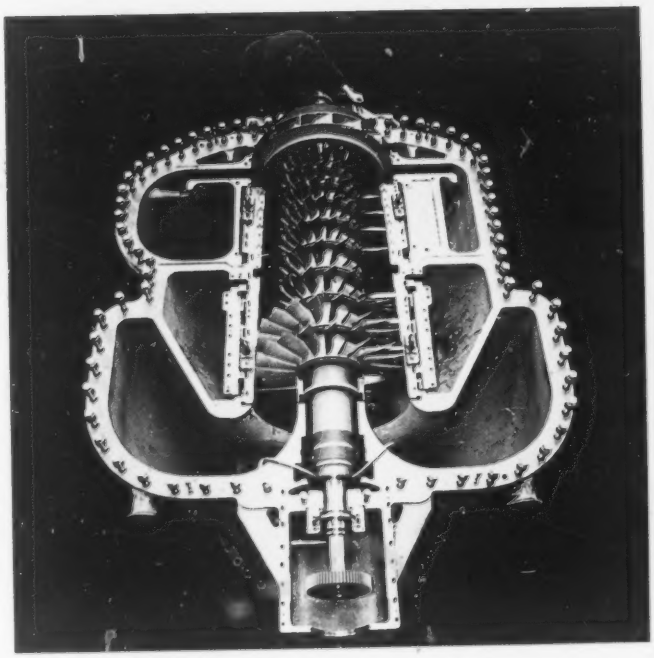

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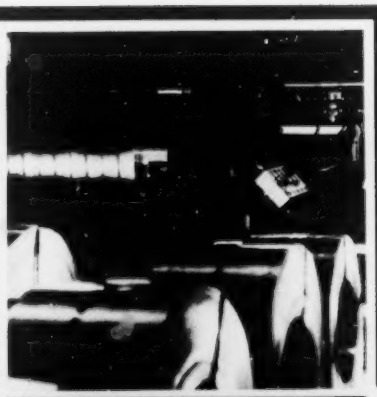

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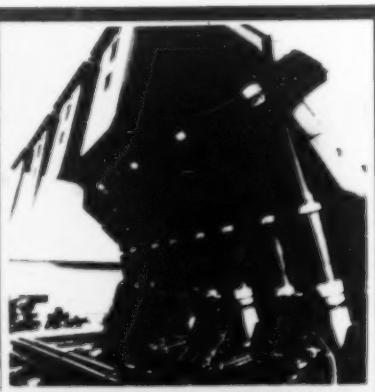

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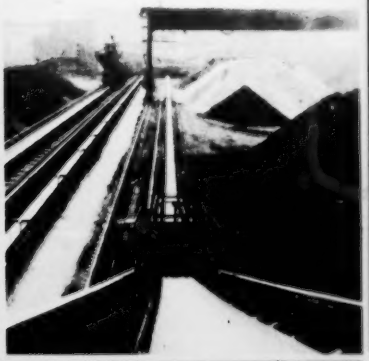

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Preface

If 1987 can be described as a year of trial, it requires no great talents as a forecaster to predict that 1988 will witness an extension of most of the concerns and disputes that have so intensely roiled the world economic arena over the past twelve months. The problems and consequences of trade and budget imbalances, volatile exchange rates, protectionist threats, and uncertain stock markets will remain a central concern in the coming year too.

The cartoon pundit Charlie Brown once observed that no problem is so big or so complicated that it can't be run away from. Although many policy makers over the past year have sometimes created the impression that they were doing precisely that, I submit that the notion is more apparent than real. To wit, Washington and Bonn in particular have relied very heavily on the interplay of market forces to achieve their respective goals. Even in an era that increasingly rejects the conventional tools of pervasive government intervention in our economies, any notable reliance on Adam Smith's "invisible hand" during difficult times frequently disconcerts even some of the most avid supporters of free market economics. But if government restraint and greater resort to truly entrepreneurial policies have contributed so much to the economic prosperity of the last five years, why shouldn't this same approach, applied creatively and sensitively, help to foster economic order and stability against the threat of a storm? Again, I submit, appearances can be deceiving.

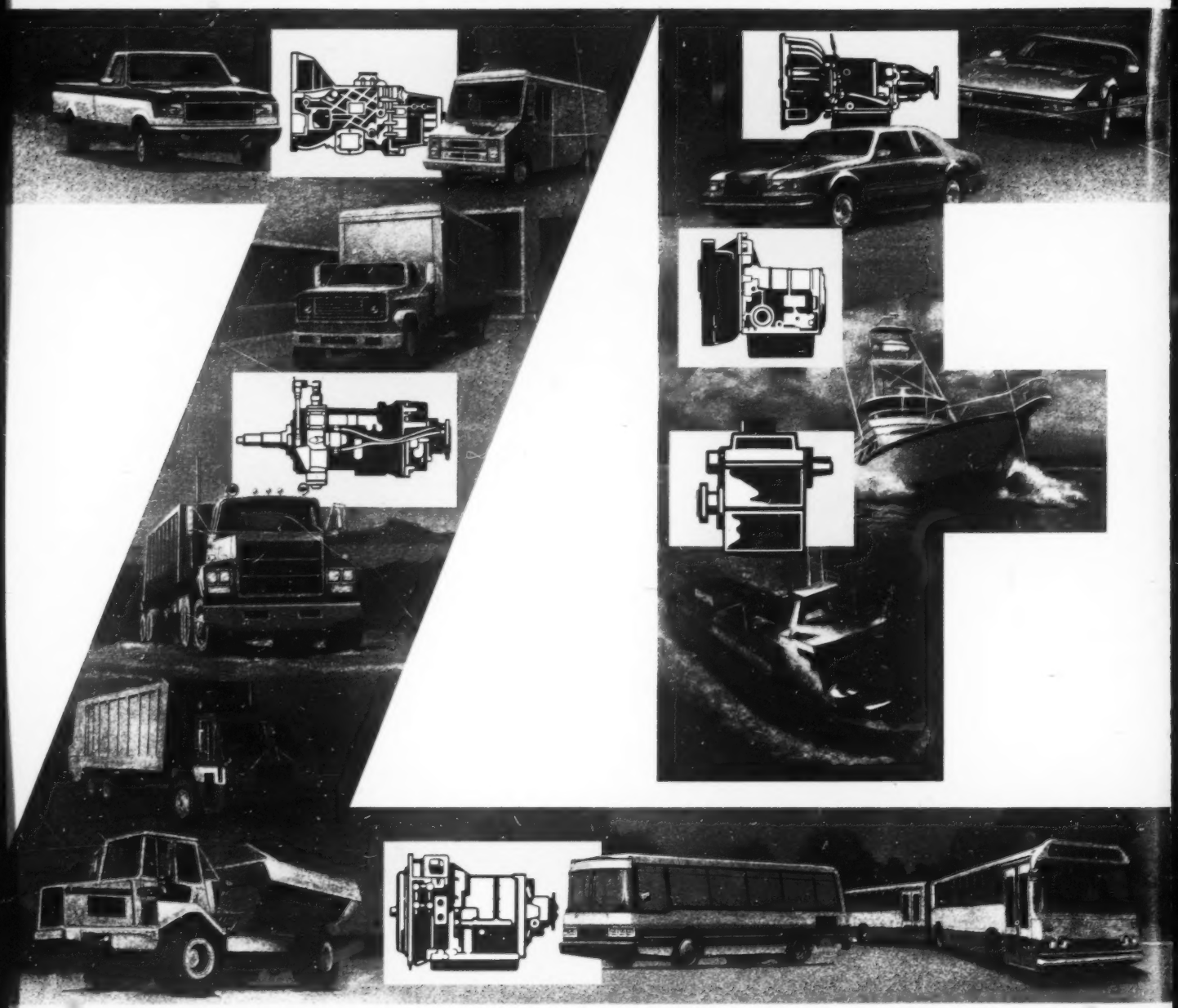
Two of the most salient events of 1987 were the strong and steady depreciation of the dollar and the U.S. stock market crash of October 19. As to the dollar, even at this stage major differences remain about what the appropriate level of the American currency should be. There seem to be four distinct positions about its proper level: too high, too low, about right, and about right if certain steps are taken. Which is to say that most of the "experts" disagree. Clearly, its ultimate parity will be determined by market forces and not by fiat.

John Kenneth Galbraith has described the October stock market crash as "the most traumatic economic event of our time". But trauma is not necessarily equivalent to crisis or chaos, and the course of the next few months may prove discomfiting to those who see Wall Street as the fulcrum of the universe. Incontrovertibly, though, it issued an urgent warning signal—as markets are prone to do—and may well have served us memorably in doing so.

The 1987 edition has been re-titled the *United States-German Economic Yearbook*, which we feel more appropriately reflects the substance of its content and goals. I believe most emphatically that the articles in this volume represent not only an overview of past accomplishments but also a perspective on the future. I hope you will agree that they are a testimony to the quality of critical effort, interchange, and creativity that have made both our nations such powerful economic partners in the global arena.

In this same vein, I want to take this opportunity to express my appreciation to the distinguished American and German authors who have given so ably and generously of their time. Their contributions represent, in my opinion, the essence of the U.S.-German business relationship, which derives from and thrives upon a mutuality of interests and dynamism.

Werner Walbroel
Executive Director
German American Chamber of Commerce
December 1987



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And to sustain this momentum, ZF invests heavily in research and development. So while competitors discuss our current technology, we're developing and perfecting new designs for our customers.

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Ford—Weltstrasse zur Spitze

Ford's Global Route to Excellence

Donald E. Petersen
Chairman
Ford Motor Company

In front of Ford Motor Company's world headquarters in Dearborn, Michigan, flags representing 29 nations attest to the international nature of the company.

The first step in establishing that international heritage came shortly after Ford's incorporation in 1903, when we shipped to Canada the sixth vehicle off our first assembly line. Today, we have sales, assembly or manufacturing affiliates in 23 countries and international business relationships, such as joint ventures, in 10 nations.

Our affiliates—grouped geographically in North America, Latin America, Europe and Asia-Pacific—operate with a great deal of autonomy, but as members of the *Ford family*, all are active players in Ford's quest to make the most of its international resources. Ford's relationship with its European affiliates—in particular, its close ties with staffs in England and Germany—are playing an important role in establishing a truly competitive worldwide power base for Ford now and over the next several years.

Ford of Germany—Ford-Werke AG—today is central in our pursuit of excellence in crucial areas such as design, engineering, technology, production and communication. In addition, in the next few years our German company will contribute in several very important ways to Ford:

- Its employees will be among those leading our team that is developing a new car to be sold in Europe and North America.
- German design and engineering will have a significant impact on this important new product, just as they have on Ford's European product line and even our products in the U.S.

Ford of Germany...today is Ford's third-largest operation worldwide.

- Ford-Werke will continue to be important as our source in America for premium, driver-oriented automobiles including Scorpio and XR4Ti.
- Engineers in Germany will share their ideas with other Ford engineers around the world, as a first-of-its-kind, computerized Worldwide Engineering Release system connects 20,000 users in a common system.
- And its state-of-the-art communications link with Ford offices in England will be a model for Ford operations worldwide.

Meanwhile, Ford's joint venture with Volkswagen in Brazil and Argentina provides a good example of how our relationships with other automakers internationally will play an increasingly important role in our global strategies.

Ford-Werke: Its Focus on Ford's Worldwide Map

Ford of Germany, which began assembling 50 Model T's a day with 101 employees in Berlin in 1926, today is Ford's third-largest operation worldwide. Out German affiliate employs 46,500 people, including a work force of 36,000 in

Germany and another 10,500 people at its branch in Genk, Belgium. That ranks Ford of Germany closely behind our affiliate in the United Kingdom, which employs about 48,000 people.

Moreover, Ford-Werke today produces about one-quarter of all the cars and trucks built by Ford outside the U.S. and Canada. In 1986, Ford of Germany build 826,916 vehicles, all of which rank among Europe's most popular vehicles: Fiesta, Scorpio, Sierra, Escort, Orion and Transit.

For years, its output also has been sold in North America. Through its history up to July 1987, Ford-Werke has exported to the U.S. and Canada nearly a million vehicles: 314,783 Fiestas, 512,402 Capris, 35,657 XR4Ti's, and 6,731 Scorpios. In addition, it has exported to North America 2.3 million engines (for Pinto, Mustang and Ranger/Bronco), and more than two million assorted gearboxes.

Including exports to other European countries, Ford of Germany's car exports (including cars built in Genk) in 1986 accounted for 20.6 percent of all the cars exported from Germany. These exports—which totalled 540,000 units—comprise about two-thirds of the affiliate's production.

To meet this demand, Ford-Werke operates 17 assembly and manufacturing plants and a score of other operations, including one of Ford's major worldwide research and engineering centers, Ford's European proving grounds, a parts center and administrative offices. Ford of Europe also spends approximately $4 billion yearly with German component suppliers. In the next five years, Ford will invest about $7 billion dollars in its operations in Europe, most of it in Germany and the U.K.

Including exports to other European countries, Ford of Germany's car exports ...in 1986 accounted for 20.6 percent of all the cars exported from Germany.

Overall, Ford of Germany's sales in 1986 totalled DM 16.7 billion ($7.7 billion). Meanwhile, its net profit of DM 587.2 million ($270.7 million) in 1986 contributed substantially to Ford' $559 million profit in Europe and its worldwide record profits of $3.3 billion that year.

In the next few years, we see Ford of Germany playing a major role in one of Ford's most important new product programs ever—one that underscores the significance of Ford's global resources.

The *Centers of Excellence* Concept

For years, the overseas affiliates of U.S. multinational corporations, at least in the automotive industry, have been *centers of independence*. That is, they operated semi-autonomously, setting their own goals for meeting the needs of their unique markets.

That has included developing vehicles from the ground up that were completely different from others produced by affiliates in other parts of the world. This process included developing independent strategies for design, or packaging and styling; engineering of mechanical and electronic systems; purchasing and supply and other operational areas related to introducing new-model cars, trucks and components. This independent approach was encouraged by then-existing national trade barriers, as well as by differing national tastes and government requirements.

In 1952, for example, Ford of Germany introduced a new Taunus, which competed in the German market as a medium-sized, medium-priced car. However, no parts of the Taunus were interchangeable with those of the new medium-sized, medium-priced British Ford products, or the medium-priced car that Ford of France had introduced. Nor did these relatively similar vehicles have any parts in common with any American Ford models.

But today's automotive industry is increasingly a global, not a national, one—and an increasing number of competitors have become active players in more and more markets. Because of this dramatic change in the nature of the automotive industry, Ford has recognized that yesterday's *centers of independence* do not make for today's most efficient means of designing and engineering cars, trucks and components, or of completing the numerous other steps necessary to bring products to market.

Instead, we've recognized that each of our product development sources can become *Centers of Excellence* for worldwide vehicle or component programs. We must approach new development programs with an eye toward utilizing their strengths not only for their own markets, but for others.

An example of our use of the Centers of Excellence concept will be the development of a new medium-sized car for both the European and North American markets, a team effort that will be led by our staffs in Merkenich, West Germany, and Dunton, England.

Ford has a tremendous wealth of development and design resources. At Dearborn and in our European team spread between Merkenich and Dunton, we have staffs capable of developing new products from start to finish. In studios in Los Angeles and Turin (Italy), staffs specialize in styling and packaging. Other Ford product development centers, such as those operated by Ford Australia and Autolatina, our joint venture with VW in Brazil and Argentina, also have much input. Each of these locations has distinctive skills and talents—areas of excellence and experience that, ideally, could be employed not just in developing new vehicles and components in their own country, but also in other countries where Ford does business.

Car design, like architecture and a variety of consumer products, has been strongly influenced by the Bauhaus school that developed in Germany in the earlier part of this century.

In the case of the medium-car project to be led by our European product development staff, we are convinced that a common vehicle platform will satisfy two sets of customers—one in Europe, the other in North America. That common platform can be tailored to fulfill different needs in the individual markets. For instance, the exterior sheet metal, passenger compartments and perhaps the ride and handling characteristics of the cars may differ on the

One of Ford's production plants in Germany.

two continents.

The benefits of such a program are obvious. The development of two cars that meet the needs of similar markets costs twice as much and represents a duplication of effort. If we rationalize design and engineering at one *center*, we get more product, better product, and do a better job. Embracing this approach should cut costs significantly

Our product development activity in Germany today has the state-of-the-art technology necessary to produce some of the world's most impressive vehicles.

through the life of the program and allow us to bring to market more customer-driven products within existing resources.

Excellence of German Engineering and Design

It should not be surprising that Ford of Europe is taking the lead in this midsize car program. It has long been recognized that European vehicles of this class are among the most appreciated worldwide for their engineering, including their overall integrity, technology and road-handling abilities, as well as their *driver's car* orientation.

In addition, car design, like architecture and a variety of consumer products, has been strongly influenced by the Bauhaus school that developed in Germany in the earlier part of this century.

However, anyone who remembers the tailfins and chrome of the classic American cruiser of the 1950's realizes that it took consumers—at least in the U.S.—some time to accept the *form follows function* ideology that first inspired Bauhaus advocates.

Today's vehicles have an increasingly *international* style epitomized by clean lines and functional forms. Our newest models in the U.S.—the Ford Taurus and Mercury Sable—have won acclaim and numerous awards, including Taurus' being named *Motor Trend* magazine's *Car of the Year*. Many people are comparing Taurus' and Sable's styling with that of their European cousins. Ford' s Scorpio, which debuted in Europe a year before Taurus and Sable were introduced in North America, set a Ford record as the company's most-awarded vehicle. It captured 18 trophies in all—including Europe's most prestigious *European Car of the Year* award.

The aerodynamics of Ford's vehicle line both in North America and Europe is perhaps the most visible example of how the sophistication of our vehicles has evolved. But improvements in the design and engineering or our products on either side of the Atlantic didn't happen without planning and investment. Our product development activity in Germany today has the state-of-the-art technology necessary to produce some of the world's most impressive vehicles.

In October 1983, for example, Ford completed construction of a $9 million aerodynamic wind tunnel at our Merkenich research and engineering center. The test facility, which measures a vehicle's wind resistance, can generate wind speeds of up to 186 mph. The Merkenich research center—officially called the John Andrews Product Development Center—also includes a design center, two engineering complexes, testing and development laboratories, a safety test facility and a track where engineers can drive cars on 18 special surfaces.

At Merkenich, about 150 Ford-Werke designers create the exterior styling of Ford's future European cars and trucks. Their counterparts at the design center in Dunton, England, are charged with the vehicles' interior design. As you might imagine, that means that communication between Merkenich and Dunton has evolved into a fine art. Breakthroughs in communications technology help.

For instance, designers in Germany can share their drawings and pictures of models with Dunton or others through a special *slow scan* television network. At these special work stations set up in design studios at Ford locations around the world, designers can transmit drawings via satellite onto TV screens connected on a satellite network. Similar technology enables them to send copies of their drawings over telephone lines, much like the systems that news services use to send photos internationally.

Ford designers from around the world also meet yearly to discuss future directions and trends. In September 1987, Ford's design chiefs gathered for discussions in Merkenich,

At Merkenich, about 150 Ford-Werke designers create the exterior styling of Ford's future European cars and trucks.

then visited the Frankfurt Auto Show, the premier auto exposition in Europe. They concluded with a visit to Ford's Ghia international design studio in Turin.

Thanks to this annual *meeting of the minds*, Ford designers have created for Ford a distinctive look that traverses our entire vehicle line. They realize that cross-cultural differences and tastes are becoming less prominent in establishing design trends. Marshalling Ford's design talent at various corners of the globe will continue to ensure a

common direction for Ford products of the future in North America, Europe, Asia and other affiliates.

Other Ways We're Communicating with Europe

Engineers who design systems for our first *center of excellence* cars also will be equipped with a state-or-the-art tool that will enable them to share detailed engineering drawings with their counterparts in England and the United States. This computer-based system, called the Worldwide Engineering Release System—or WERS, for short—is an automotive industry first in terms of size and capability. When fully launched, WERS will link manufacturing and engineering groups at Ford locations worldwide. It will provide 20,000 users with interactive access to a common data base of engineering specifications and will further enhance Ford's capability to execute world-car programs.

In Germany, WERS came on-line in mid-November of 1987. There a total of 1,200 engineers and another 2,000 production personnel at assembly and manufacturing plants and at Merkenich are using more than 430 personal computers to obtain access to the engineering release data. Each of the 3,200 people in Germany involved in this new program will receive 160 hours of instruction and 100 hours of practice on the system, for a total of 832,000 man-hours of training. We think that the efficiencies that WERS will bring justifies this intensive investment.

Another exciting area of communication where Ford's German and British affiliates have made significant contributions is in video conferencing. The first private video conferencing studios in Europe were set up at Ford locations in Dunton and Cologne in 1984. In the same time frame, another video conferencing studio was launched at Ford's headquarters in Dearborn, and soon another will be installed in Ford offices in Hiroshima.

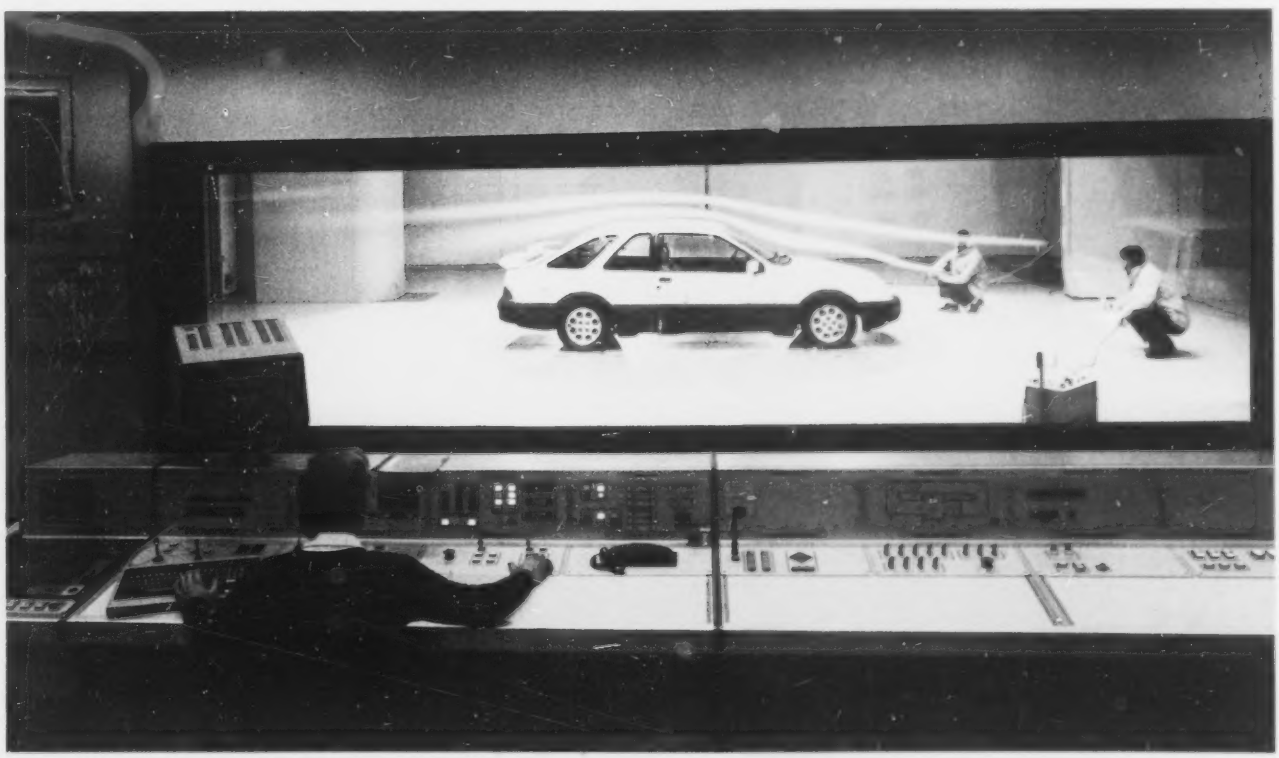
Video conferencing provides a cost-effective alternative to face-to-face meetings that eat up travel time and money. Video conferences can be arranged at short notice. Documents, component parts and other props can be used. Ford's decision-making processes are speeded up. And busy executives can move right on to other pressing matters.

America's Taste for German Cars

America's taste for luxuriously designed and engineered *driver's cars*—like the ones Germany is famous for—has been apparent for years. Until fairly recently, though, the U.S. market for this class of vehicles—a class we call *premium import*—has been relatively small.

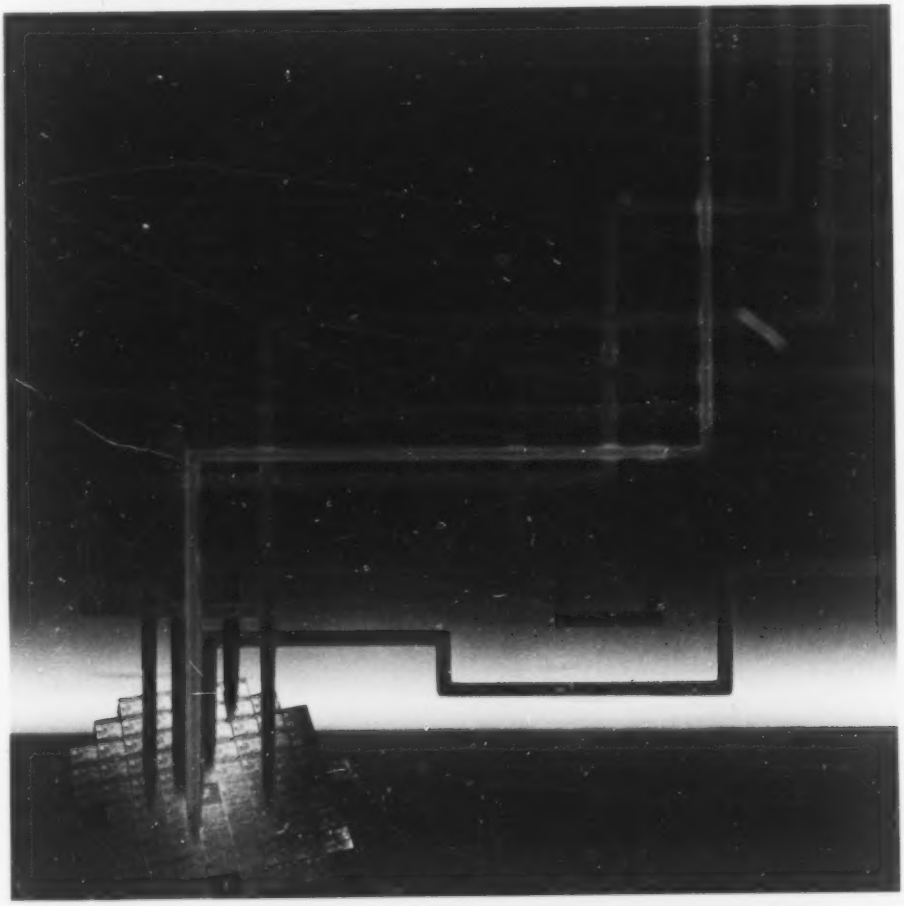
America's taste for luxuriously designed and engineered "driver's cars"—like the ones Germany is famous for—has been apparent for years.

But that has changed, and quickly. In 1964, only 47,000 premium import cars were sold in the U.S. In 1974, Americans bought 299,000 and ten years later, 680,000. And by 1986, that number had increased 18 times from 1964, to reach 864,000. What makes these cars special? Why are



Improving the aerodynamics of Ford cars.

The future depends on the creativity of the present.



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The undersigned acted as financial advisors to Beecham Group p.l.c.

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The undersigned acted as financial advisors to Ecolab Inc.

The First Boston Corporation

Credit Suisse First Boston Limited

other manufacturers—the Japanese among them—rushing to bring products into this newly important North American market?

Over the years, European cars have evolved as vehicles better equipped to handle driving on narrow, undulating roads and tight curves, at high speeds and with excellent driver control...with an aura of understated elegance. Thus the European image was created. In America, that image became more attractive as Americans' desire for *driver-oriented* cars grew along with American consumers' economic power and their increasing sophistication about international styles.

The new-found popularity of higher priced premium import cars in North America has opened up new areas of opportunity for us and for other manufacturers. Thus, Honda introduced its *Acura* line here, soon to be followed

When we introduced Scorpio, we also introduced some of the industry's most innovative marketing packages.

by Nissan's *Infiniti* and Toyota's *Lexus* lines. Meanwhile, sales of Mercedes', BMWs, Audis, Saabs and other models have reached more and more buyers.

Ford U.S., because of its long and close relationship with its German affiliate, has been able to take advantage of this *megatrend* by introducing two German-made models—the Sierra and the Scorpio—for sale in North America.

A Sierra model, which is called the XR4Ti in North America, was the first of the two cars introduced there, early in 1985. The car was well received by the North American automotive press and enthusiasts.

This version of the German Sierra is built for export to the U.S. and Canada by Wilhelm Karmann GmbH at its assembly plant located about two hours northwest of Cologne in the town of Rheine. Karmann, which is headquartered in Osnabrueck, is capable of producing relatively small volumes of specialty vehicles; it also assembles the Escort Cabriolet convertible sold by Ford in Europe.

The Scorpio, which is larger and more luxurious that the XR4Ti, was only introduced in North America in 1987. Its reception has been remarkable, with 3,500 Scorpios sold within three months of its introduction. This car is built at Ford-Werke's Niehl complex in Cologne.

Both XR4Ti and Scorpio are well-balanced driver's cars intended to lure step-ahead American buyers with their craftsmanship, quality and driver's orientation. Both vehicles have high-level equipment packages, with only a few options left for the consumer to decide on. These include automatic transmission, power moonroof or a special touring package that includes leather interior, power moonroof and trip computer.

When we introduced Scorpio, we also introduced some of the industry's most innovative marketing packages. We had discovered, for example, that the resale value of Scorpio is important to U.S. buyers in this class. Therefore, when Scorpio buyers trade in their car in two-to-four years, we will match its trade-in value to the percentage of retained value of a Mercedes 190E of the same model year.

In addition, Scorpio buyers can expect their dealer to

Henry Ford I lays the cornerstone of the Ford plant in Cologne on October 2, 1930.

loan them another car free if their car is in for service. We started a special Scorpio Auto Club, which includes road service reimbursements and more. And Scorpio buyers can even take delivery of their vehicle in Europe—when they begin a vacation there, for instance. At their convenience, we'll ship it from Europe to their home dealership in the U.S.

Scorpio and XR4Ti are important image builders for Ford in North America. Their European heritage reminds customers of Ford's international scope. And sales of XR4Ti and Scorpio often bring new buyers into our fold, buyers who would prefer to buy a European-made car.

International Business Relationships

In addition to focusing on issues such as quality, new product development communications and marketing with our affiliates like Ford of Germany, Ford Motor Company

When Scorpio buyers trade in their car in two-to-four years, we will to match its trade-in value to the percentage of retained value of a Mercedes 190E of the same model year.

also has been studying a possible link with other automakers. In the automotive area, we now have established business relationships, such as joint ventures, model-sharing programs, or joint-assembly programs, with other automakers in ten countries.

For example, in Brazil and Argentina, where Ford operations have consistently been facing pressures due to an unstable automotive market, we recently created a joint venture, Autolatina, which combined the automotive and credit operations of Ford and VW.

Autolatina will maintain the unique identity of Ford and VW nameplates, as well as separate Ford and VW dealer networks in Brazil and Argentina. But by rationalizing facilities and resources, the Autolatina venture will achieve greater efficiencies and better use of manufacturing facilities.

Robots turn out Scorpios, part of Ford's top-of-the-line offerings in the U.S.

Ford also has joint ventures and other cooperative arrangements in other parts of the world that accomplish similar goals. In 1987, a joint assembly company was established in New Zealand, combining Ford and Mazda assembly capacity there. (Ford has a 25 percent interest in Mazda.) There also are joint ventures of Ford equity stakes in other companies operating in Japan, Korea, Turkey and the U.K. Ford Australia recently announced that it had reached agreement in principle with Nissan on a limited model-sharing program.

Conclusion

In the 1960s, Canadian communication theorist Marshall McLuhan theorized that the world would become a *global village*, dramatically changing established ways of life. Today we are seeing that prediction come true in the auto industry. Many of the topics I've just discussed address ways to achieve those goals through increased involvement of our company-wide affiliates like Ford-Werke.

Our affiliate operations are no longer insulated by geographic distance. Instead, through use of sophisticated telecommunications, computer technologies and management that values people's contributions, we are coming ever closer to establishing a network of people whose goal is the same: to make Ford a leader in the automotive industry worldwide. That's good news for Ford—and for affiliates like Ford of Germany that have so much to offer the company, their countries and the world. ■

ZUSAMMENFASSUNG

Ford - Weltstrasse zur Spitze

Vor dem Hauptquartier der "Ford Motor Company" in Dearborn, Michigan wehen die Fahnen von 29 Nationen und zeigen die internationale Natur des Unternehmens.

Unsere Tochtergesellschaften in Nord- und Suedamerika, Europa und im asiatischen Pazifikraum handeln mit einem hoben Grad art Selbstaendigkeit, sind aber alle Mitglieder der "Ford—Familie". Sie sind alle aktive Mitspieler bei der Aufgabe, dass Beste aus den internationalen Ressourcen herauszuholen.

Ford in Deutschland—die Ford Werke AG—steht im Mittelpunkt unseres Strebens nach Perfektion in entscheidenden Bereichen wie Design, Motorisierung, Technologie, Produktion und Kommunikation. Daneben wird unsere deutsche Gesellschaft in den naechsten Jahren Beitraege in einigen wichtigen Bereichen fuer Ford leisten:

- Ihre Angestellten werden unter denen sein, die unsere Entwicklungsabteilung fuer ein neues Modell in Europa und Nordamerika leiten
- Deutsches Design und Technik werden einen bedeutenden Einfluss auf dieses neue Auto haben; genauso wie auf Ford's europaeische Produktlinie und sogar auf unsere US Produkte
- Die Ford Werke werden weiter als Quelle fuer hervorragende fahrerorientierte Autos in Amerika wichtig sein, wie den Scorpio und den XR 4 Ti
- Deutsche Techniker werden ihre Ideen mit anderen Ford Technikern rund um die Welt austauschen und in eine weltweite Technik Datenbank einfuehren, die 20.000 Benutzer in einem System verbindet
- Die nach dem neusten Stand errichtete Kommunikationsverbindung mit den englischen Bueros wird das Vorbild fuer das weltweite Ford vorgehen sein

Ford Deutschland begann 1926 mit 101 Angestellten in Berlin und setzte taeglich 50 Ford T-Modelle zusammen. Heute ist Ford Deutschland die drittgroesste Einheit weltweit. Sie hat 46.500 Mitarbeiter davon 36.000 in Deutschland und weitere 10.500 in Genk, Belgien. Damit liegt Ford Deutschland dicht hinter der englischen Tochtergesellschaft, die 48.000 Mitarbeiter beschaeftigt.

Die Ford Werke produzieren heute ungefaehr ein viertel aller PKW's und Transporter, die von Ford ausserhalb der USA und Kanadas hergestellt werden. 1986 wurden 826.916 Fahrzeuge gebaut, alle unter den beliebtesten Wagen Europas: Scorpio, Fiesta, Sierra, Escort, Orion, Transit.

In den sechziger Jahren hat der Kommunikationswisssenschaftler Marshall McLuhan gelehrt, dass die Welt ein "global village" wuerde, was die bestehenden Lebensumstaende dramatisch veraendern wuerde. In den Autoindustrie sehen wir wie diese Voraussage wahr geworden ist.

Unsere Tochtergsellschaften sind nicht mehr durch die raeumliche Distanz isoliert. Durch dem Einsatz der Telekommunikation, der Computertechnik und des Managements, welches den menschlichen Beitrag steuert, kommen wir naeher an die Errichtung eines Netzwerkes zwischen Menschen die an einem gemeinsamen Ziel arbeiten: Ford zum Fuehrer der "automobilen" Industrie in der Welt zu machen. Das sind gute Nachrichten fuer Ford und fuer Tochtergesellschaften wie Ford Deutschland, die der Firma, ihren Laendern und der Welt so viel geben. ❑

Remember what it was like to drive a car by the seat of your pants?

Hair flying. Heart pounding. Pulse racing. You flew. Limitations were exceeded. Expectations surpassed. You and the car were one.

The same is true of the new 90 Quattro.

With permanent all-wheel drive, Quattro traction comes to grips with the road at all four wheels. The feeling of control reassuring. The performance exhilarating.

Five cylinders produce 130 HP. Sixty is reached in 8.5 seconds. Top track speed is 128 MPH. Drag coefficient a world class 0.32.

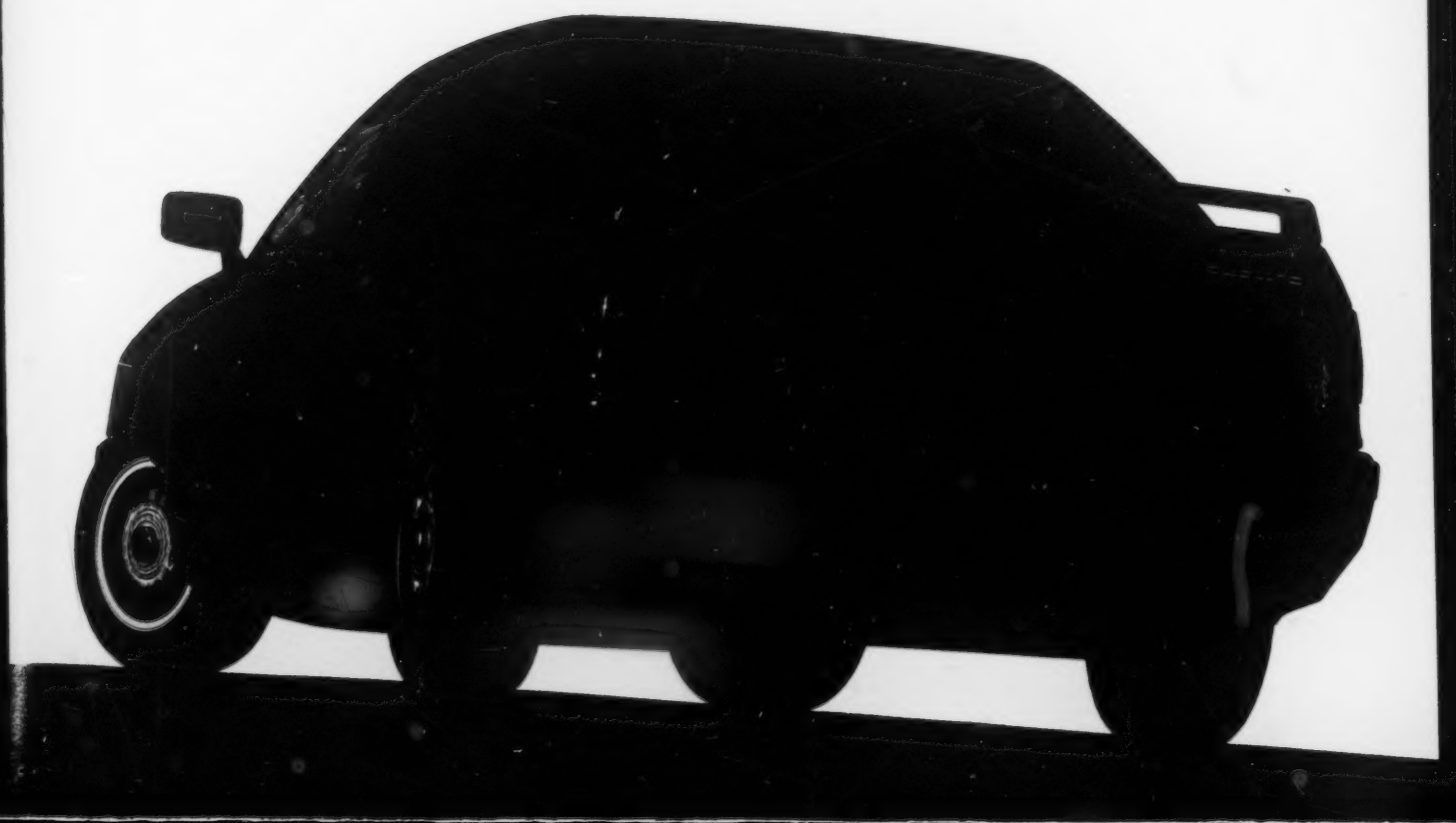
Steering is precise and quick. The basic suspension design rallye proven. The engine smooth revving. And soundly satisfying.

An Anti-Lock Braking System (ABS) is standard. Quick stops from speed are more easily controlled.

Leather sports seats hold you firmly. You ride secure. Senses alert. Every control at your fingertips. All is in harmony. You and the car are one.

Driving is what you hoped it would be. When you were a kid. In a little car. Racing down a hill.

INTRODUCING THE NEW AUDI 90 QUATTRO.



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Marketing fuer zivile Flugzeuge in Nordamerika

Commercial Aircraft Marketing in North America

Alan S. Boyd
Chairman
Airbus Industrie of North America

The market for commercial aircraft is larger in the United States than anywhere else in the free world. Sales in that substantial market are dictated to a large degree by one single factor—the bottom-line economics of the aircraft. While airlines in regulated environments place importance on technological advances and passenger amenities, in the deregulated U.S. market, the airlines must value profitability above all considerations save safety. Repeat aircraft sales in the United States are based on support of products already placed in the market.

Airbus Industrie, as a European commercial aircraft manufacturing consortium in an industry dominated by American firms, faces unique challenges marketing its aircraft in North America. In addition, Airbus Industrie is the newest entrant in the field, facing well-entrenched competition. It is within these constraints that Airbus Industrie markets its commercial aircraft product line in North America.

Success in the U.S. Market

In the United States, airlines have traditionally made decisions involving large numbers of aircraft at a single time—much larger that the rest of the world. Recent examples include the United Airlines' order for 110 737s and Northwest's order for 100 Airbus A320s. This makes every deal in the States very important to the manufacturers.

Airbus Industrie has recently begun to have considerable success in the United States. In 1976, there were no Airbus aircraft in service or on order in North America. Eastern Air Lines signed a deal for 34 in 1977 (the Eastern A300 fleet is still the largest in the world), and there were no more orders until 1985. In May of that year, Pan American signed for 12 A310s and 16 A320s. Following their order, Continental ordered A300s, Northwest ordered A320s, Wardair International (Canada) signed for A310s, and American Airlines launched the A300-600R. In addition, the leasing companies GATX Air and ILFC have ordered Airbus aircraft.

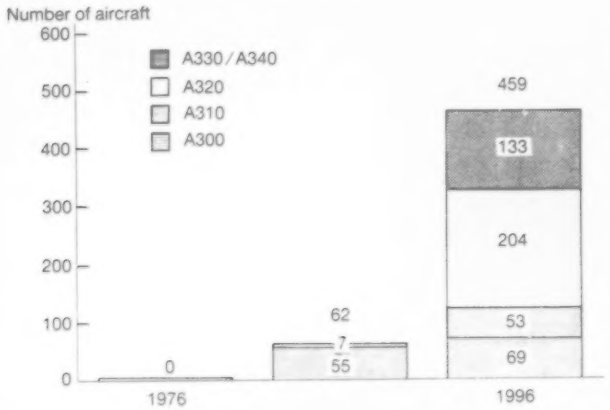
Airbus Industrie expects to have delivered a total of 459 aircraft to North American customers by 1996.

From an order book of 34 in 1984, Airbus Industrie has achieved a total of 181 new aircraft sales in North America, an increase of 433 percent in three years.

Airbus Industrie expects to continue to succeed in the U.S. marketplace. Indeed, to prosper in the marketplace, any aircraft manufacturer must do well in the United States. Airbus Industrie expects to have delivered a total of 459 aircraft to North American customers by 1996. This compares with 67 Airbus aircraft delivered by the end of the third quarter 1987.

Airbus Industrie is taking steps to assure this continued market penetration. The first is the design and manufacture of a product line that is recognized as the most technologi-

Airbus fleet - North America



cally advanced in the industry. Airbus Industrie has been the pioneer of many innovations, including (but not limited to) the concept of twin-engined widebodied aircraft, automatic windshear protection systems, and a two-person cockpit in a widebody aircraft.

Airbus Industrie has incorporated these innovations only when they have increased the safety and/or profitability of the aircraft. This technology has led to market penetration in the United States. Airbus Industrie is now working to ensure that continued penetration.

Product Support to Foster Success

The most important work is the assurance of support for the aircraft already sold in the States. The quality of this support will dictate whether any other U.S. carriers will trust millions if not billions of dollars on Airbus Industrie products. Airbus Industrie is rapidly expanding its product support operations in North America. This expansion is in three areas: training, technical customer representatives and spare parts.

Airbus Service Company, the product support subsidiary of Airbus Industrie of North America, has opened a training facility at the Miami International Airport that provides training to all flight, cabin and maintenance personnel for operators of Airbus Industrie aircraft. The Center uses state-of-the-art training equipment together with knowledgeable instructors to provide the best commercial aircraft training possible.

The Training Center has designed its courses to meet the U.S. aviation communities' desires for more flexible training methods. This has led to the development of computer based training equipment, which can be used at the Center in Miami, or transported to the operator's base for instruction there.

In addition, this computer based training system is now being developed to include voice instruction as well. For example, the trainee indicates what area of a parts maintenance course he or she would like to study by use of the computer mouse. That section of the course is then illustrated on two screens: the first is a graphic illustration of the part and its relationship to the parts around it; and the second is an actual picture of the aircraft showing the location of the part. The computer then tells the trainee in plain English the purpose of that specific part.

Airbus Industrie is also in the forefront of cockpit personnel training. Again, in response to U.S. airlines' desire for more flexibility in training, and in the constant desire to lower costs, Airbus Industrie has developed a new training simulator. For the A320 aircraft, a Cockpit Systems Simulator (CSS) has been designed that allows training for every cockpit situation. The CSS provides excellent training on all cockpit systems that do not require visual simulation or cockpit motion capabilities, at a much lower cost to Airbus Industrie and the training airline than training on a Full Flight Simulator.

The Training Center represents a direct investment of more than $75 million into the U.S. economy, with a multiplying effect generating many more millions.

The technical customer representatives of Airbus Service Company are known to be some of the best in the business. These representatives set up offices at a customer airline's main base well before the aircraft begin arriving. They assist the airline's maintenance department in getting the facility and the personnel ready for the aircraft, and stay with the airline throughout the life of the airline's operation of Airbus aircraft. The representatives act as advisers to the airline, helping the airlines maximize the profitability of their fleet.

In 1984, there were technical representatives only at LaGuardia Airport in New York and at Miami International Airport in Miami. By the time the aircraft to American and Northwest enter service, there will be representatives at up to ten locations in North America. This phase of Airbus Service Company, technical customer support, is expanding on a continuing basis.

The Airbus Spare Part Center is located at Dulles International Airport outside of Washington, DC. One of the major questions American operators of Airbus equipment have is how and how quickly will they be able to get needed spare parts for their aircraft. The spares Center is addressing this issue in a large way.

Airbus Service Company is also pioneering new ground in the area of spares support.

The stock of spares at the Dulles location today equals over $25 million, and is growing every day. The Center's activities follow the relevant ATA specification for the presentation and handling of spares data. It uses the World Airlines Suppliers' Guide for its performance measurement guidelines.

Airbus Service Company is also pioneering new ground in the area of spares support. It is arranging with the major European suppliers to Airbus aircraft to set up their own stocks and repair facilities in North America, so that a complete product support system for all vendor parts of Airbus aircraft will exist in the United States. This is the first time that an undertaking of this magnitude has occurred in the commercial aviation industry.

All of the elements of Airbus Industrie support in the U.S. , the training, technical representation and spare parts,

are designed to grow as the Airbus fleet in North America grows, and to provide the same high level of quality associated with Airbus Industrie aircraft.

Barriers to the U.S. Market

Marketing in the United States is not based solely on the quality of the product and product support. The continued success of Airbus Industrie in the North American market will be based largely on the outcome of inter-governmental talks dealing with the commercial aircraft manufacturing segment of the General Agreements on Tariffs and Trade (GATT). Airbus Industrie has been accused of being unfairly subsidized by the governments of England, Germany and France. A discussion of the most important issues follows a brief history of commercial aircraft manufacturing and marketing in the free world.

In 1942, an historic agreement was reached by the U.S. and British Armaments Boards and confirmed in a letter from President Roosevelt to Prime Minister Churchill. To enhance the war effort against Germany, the Allies decided to assign all manufacture of transport aircraft to the United States, leaving the British Industry to concentrate on fighter planes and bombers.

By the end of the war, the U.S. manufacturers had produced more that 22,000 transport aircraft. At the same time, Boeing became established as the largest manufacturer of heavy aircraft, producing about 13,000 B-17 Flying Fortresses and 4000 B-29 Super Fortresses.

Following the war, the U.S. industries turned their efforts to supplying commercial derivatives of the military transports to the world's airlines.

Meanwhile, the industries in occupied France, and in Germany and Italy were destroyed, while British manufacturers confined their efforts to the production of fighters, bombers and trainers.

Regular transport services in Europe ceased to exist during the war, while the U.S. involvement in the war in all theaters led to a massive expansion of domestic air transport. Between 1940 and 1945, U.S. domestic traffic grew six-fold, which led to great increases in aircraft production.

Following the war, the U.S. industries turned their efforts to supplying commercial derivatives of the military transports to the world's airlines. By 1960, 10,000 DC-3s, 1,000 DC-4s, 945 DC-6s and DC-7s, and 650 Constellations and Super Constellations, among others, had been delivered. U.S. manufactured aircraft constituted at least 85% of the worlds' airline fleet.

No single European aircraft producer was large enough to compete against the U.S. manufacturers, despite the achievement of several technological breakthroughs. The A300 was launched with the support of several European governments because of the many perceived advantages of being involved in the aircraft industry, among them:

- Large and growing worldwide demand
- Minimal use of imported raw materials
- Maximum value added by application of high-level intellectual and technological resources
- Significant technological spin-off

Curtis Wright C-46s: military production by U.S. manufacturers has long constituted a form of subsidy.

Airbus Industrie was formed in 1970, and faced several large hurdles in the marketplace:

1. Zero market share
2. Deeply entrenched and effective competition
3. No name recognition
4. A reputation of poor product support by individual European aircraft projects

In addition until 1979, U.S. manufacturers were marketing in a protected environment, through the application of 5% duty on all aircraft imported into the States.

In this environment, Airbus Industrie was clearly at a large disadvantage in both the U.S. and world markets. The governments supporting the Airbus Industrie partners (Airbus Industrie receives no money directly from any government) realized that to enter the aircraft industry and establish market share would take a large infusion of time and capital. It is generally accepted that it takes at least 15 years for any commercial jet program to become profitable, and it is a fact that the great majority of civil programs never realize a profit.

Until 1979 U.S. manufacturers were marketing in a protected environment, through the application of a 5% duty on all aircraft imported into the States.

Airbus Industrie delivered its first aircraft in 1974. In the years since that time, Airbus Industrie has not made a profit. The company, however, has been systematically taking the steps necessary to become a profitable enterprise, and expects to do so by the mid 1990s.

The major steps involved in becoming profitable are:

- Manufacturing a competitive product line at competitive prices; and

• Supporting that product

The need for a competitive product line, an entire family of aircraft products, has been demonstrated very well by the Boeing Company. Airbus Industrie, with the launch in 1987 of the A330/A340 aircraft program, can now offer aircraft with from 150-330 seats, over ranges up to 7,700 nautical miles. Airbus Industrie can now fulfill the entire needs of airlines for large commercial transports. This full product line has a tendency to lead to greater customer loyalty, more repeat aircraft orders, and greater profitability.

Government Support

The commercial aircraft industry throughout the world has always been closely linked to government support. Barry Bluestone authored an independent study of the American aircraft industry, and made this conclusion: "Without the Federal government, there would simply be no (U.S.) aircraft industry, despite the fact the the commercial market is playing a much larger role than it has in the past...The degree of market sheltering and government support for the aircraft industry is nearly unique in the American economy. Perhaps only shipbuilding (approaches) the extent to which the aircraft industry relies on government sales and subsidies for survival." *(Aircraft Industry Dynamics,* pp. 170, 180)

Historically, most of the significant advances in aircraft technology have had military origins.

The major areas of subsidization for the U.S. commercial aviation industry are research and development and technology transfer from military programs to commercial ones, two closely related benefits.

According to Aerospace Industry Association of America figures for 1981 (the most recent year for which breakdowns are available), approximately 72% of the $12 billion spent on aerospace research and development was provided by the Federal government. *(Aerospace Facts and Figures 1986-1987,* p. 117*)* Barry Blusetone observed that "...no aspect of the industry, including the commercial sector, could exist without the R&D funds provided by the state or the state's purchases of military equipment." *(Aircraft Industry Dynamics,* p. 170)

Historically, most of the significant advances in aircraft technology have had military origins. A study by the Air Force found that Federal military funding was responsible for 45 of the 51 major technical advances in commercial aviation between 1925 and 1970. The list of product improvements pioneered with Federal funds include cabin pressurization, advanced avionics, high-bypass engines, inertial navigation, instrument landing systems, and many more.

Mr. Thomas J. Bacher, director—international business and government affairs for Boeing, states: "A strong military business base provides government-financed technology that benefits the civil sector. Further, military business is usually accomplished under lower risk contracting arrangements that offset the high financial and market risks associated with the civil sector."("The Economics of the Civil Aircraft Industry," Conference on the Role of South East Asia in World Airline and Aerospace Development, September 24-25, 1981, p.4)

John Newhouse, who authored the widely recognized independent analysis *The Sporty Game,*noted: "Until recently, most (U.S.) commercial transports were spun off from military airplanes built for and funded by the Air Force." *(The Sporty Game,* p. 22)

Airbus Industrie, as a manufacturer of commercial aircraft only, does not have available military transports from which to spin off commercial programs. Nor have any of its products ever been sustained in production by an order for a military derivative thereof. It does not feel this form of government subsidization is illegal or immoral. However, Airbus Industrie does feel it is wrong to characterize the commercial aircraft industry in the United States as a totally self-supporting enterprise, existing entirely on funds generated through commercial sales. It is simply not the case.

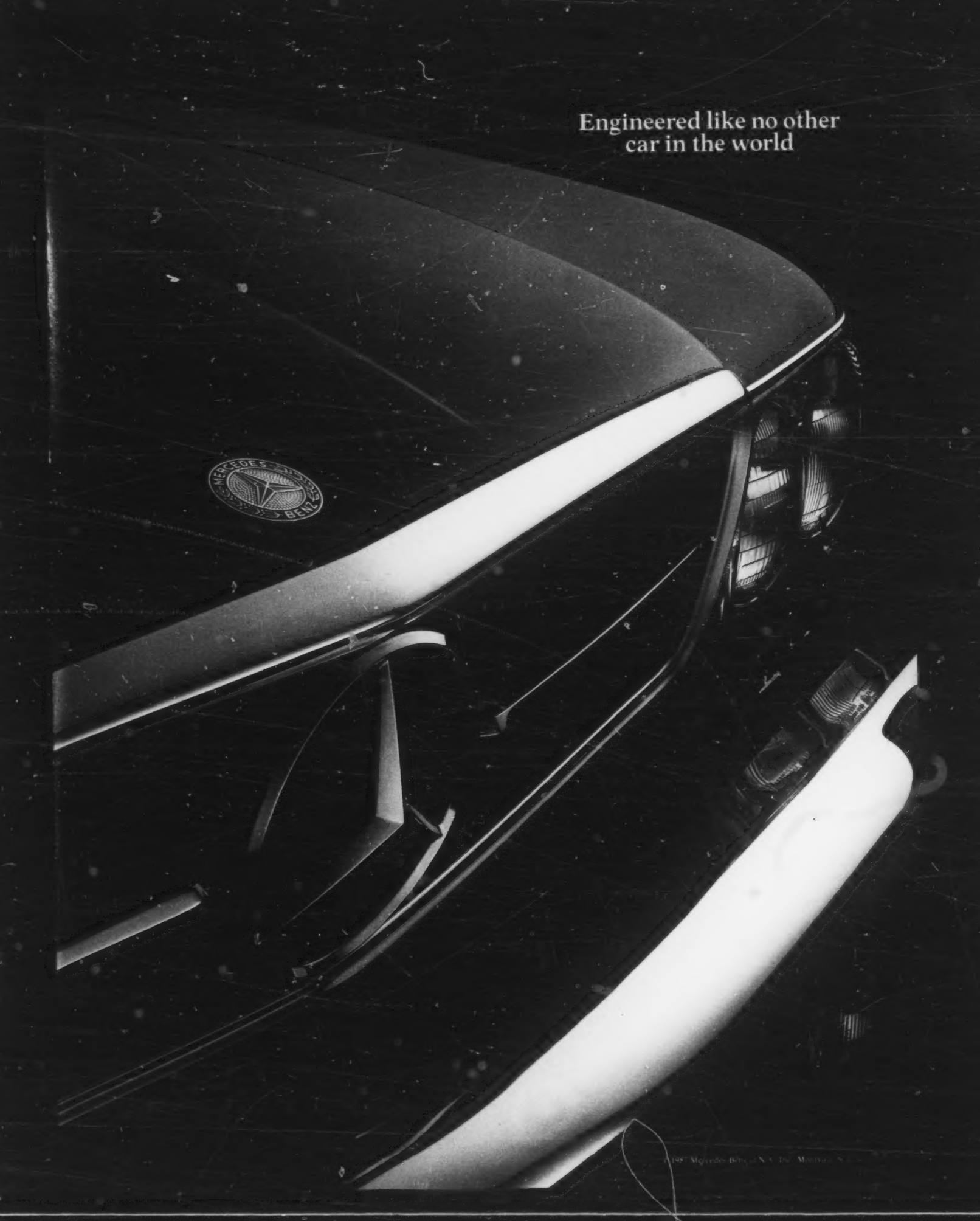
The U.S. aircraft manufacturers benefit greatly from government subsidization, as has Airbus Industrie. The money received by the Airbus Industrie partners from their respective governments is in the form of fully repayable loans.

...it is wrong to characterize the commercial aircraft industry in the United States as a totally self-supporting enterprise, existing entirely on funds generated through commercial sales.

The loans are being repaid. In addition, it is fully expected that the launch of the A330/A340 program was the last time that the Airbus Industrie partners will need to ask their respective governments for these loans. The consortium is now in position to become self-supporting and profitable.

This would not be possible if accusations of predatory pricing by Airbus Industrie were true. The aircraft built by the company are generally acknowledged as technologically superb machines. And yet, in the 18 months between March 1986 and September 1987, Airbus Industrie lost two-

The company's flight line in Hamburg prepares aircraft for flight and delivery.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thirds of the campaigns in which it competed directly with the Boeing Company. It is clearly evident that Airbus Industrie is not the pricing leader in the marketplace.

The Available Commercial Market

The number of passengers traveling by air will triple between now and the year 2005. Because of this traffic growth, Airbus Industrie forecasts the need for more than 7,700 aircraft to be delivered in the over-100-seat category in that same time period. These prospects lead Airbus Industrie to the conclusion that there is ample room for at least three large commercial aircraft manufacturers to survive and prosper in this environment.

Airbus Industrie's Global Market Forecast studies the development of the fleets of the free world's largest 204 airlines for the period 1986-2005. The forecast is, by its very nature, a long term planning tool which does not attempt to take into account the cyclical variations inherent in the aviation business, nor the possible constraints that aircraft financing may impose upon purchase decisions. The Global Market Forecast is not a reliable tool to predict short-term trends , but is nonetheless helpful to illustrate Airbus Industrie's view of the commercial aircraft market in the United States.

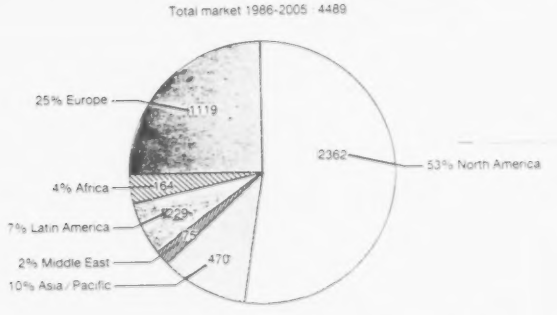
The United States historically has accounted for nearly 40% of all commercial aircraft in the free world, and this should continue to be the case in the next 20 years. By examining the results of the Global Market Forecast, one can arrive at an approximation of the market forecast for the United States and Canada. Airbus Industrie has as its stated goal a 30% share of the large commercial aircraft business, worldwide.

Airbus Industrie assumes several factors in compiling its Global Market Forecast, the most important of which are listed here:

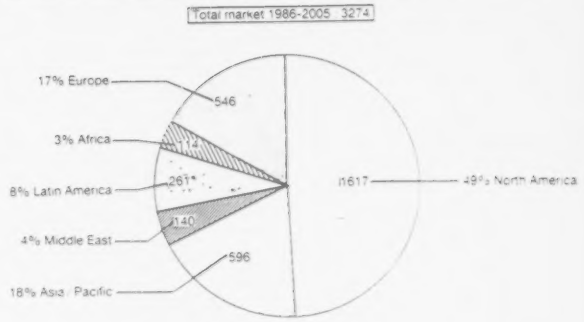
- The world economy will have a 3% annual increase of Gross National Product;
- Fuel prices will grow at an annual rate approximately equal to inflation;
- Only passenger aircraft are taken into account; and
- Aircraft are retired from their first operator after 20 years, and become available to meet open demand.

Given these parameters, Airbus Industrie divides its forecast into three categories of aircraft demand. The first are short-to-medium range aircraft (routes with no segment over 3,100 nautical miles) with 100—175 seats. Airbus Industrie's entry in this market is the A320, typically seating 150 passengers with a range of 3,100 nautical miles. The second category includes short-to-medium range aircraft with 210—600 seats. In this category are the Airbus A300-600 and A310-200, both in service today. Also, the A330, due to enter service in 1993, will seat 328 passengers with a range of 5,000 nautical miles. The third category encompasses all long-range aircraft (routes with one or more segments over 3,100 nautical miles). The Airbus A310-300 is in this category today; the A340-200 (295 seats, 6,800 nautical mile range) and the A340-300 (262 seats, 7,700 nautical mile range) will enter service in 1992.

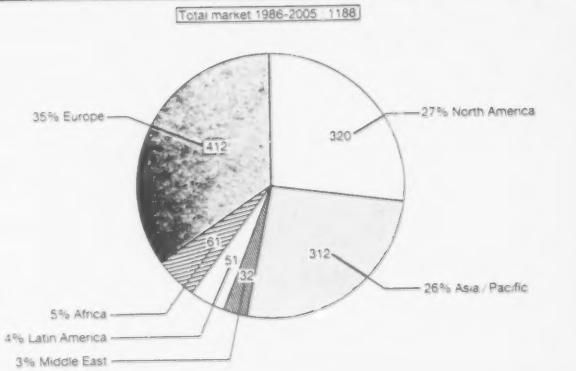
Delivery requirements :100-175 seats s/m range



Delivery requirements :210-600 seats s/m range

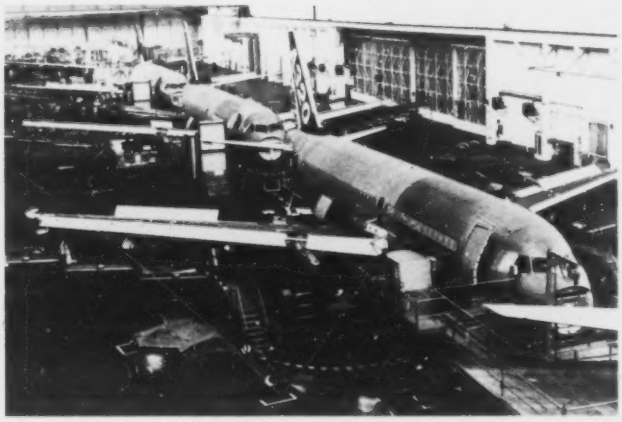


Delivery requirements :long range



Airbus Industrie forecasts a total of 4,489 aircraft in the 100-175 seat short/medium range. Of this total market, there are orders in place for approximately 900 aircraft in this category, leaving an open market for 3,600 aircraft. The United States is expected to account for 53% of the orders in this group.

In the 210-600 seat short/medium range market, the United States will account for 49% of the orders. The total world market is seen to be 3,274 aircraft between now and 2005, with orders in place for approximately 175 aircraft, leaving an open market for 3,100 aircraft.



A320 series production is gathering pace.

Finally , in the long-range market, there will be a total need for 1,188 deliveries, with approximately 150 orders in place, resulting in an open market for 1,000 aircraft. The United States accounts for a relatively small part of the sales in this segment, 27%. Sales in Europe will account for 35% of this market.

Airbus Industrie has as its stated goal a market share of 30% of the world's large commercial airliners. This does not translate directly into 30% of each of three aircraft types used for the Global Market Forecast, due to the varying degrees to which Airbus Industrie is involved in each market category.

Airbus Industrie expects to deliver 882 A320 aircraft between the years 1988 and 2005. Peak delivery years will be 1990—1993, during which nearly 400 of the aircraft will be delivered, and Airbus Industrie is increasing its production rate for the A320 to meet this demand. The A320 was the most successful civil aircraft program even before first flight.

As a percentage of market share, Airbus expects to capture 23% of the open market for short-to-medium range aircraft with 100- 175 seats with the A320. The market will be worth approximately $91 billion (1986 U.S. dollars), with Airbus Industrie's share equal to $21 billion.

In the short-to-medium range category for aircraft with 210 -600 seats, Airbus Industrie expects to obtain a greater market share. This is due to the lead of Airbus Industrie in twin-aisle twin-engined aircraft, with the A310-200 and A300-600 both in production now, and the A330 launched and available from 1993. This is the largest market segment, both in terms of numbers of aircraft and Airbus Industrie's expected share.

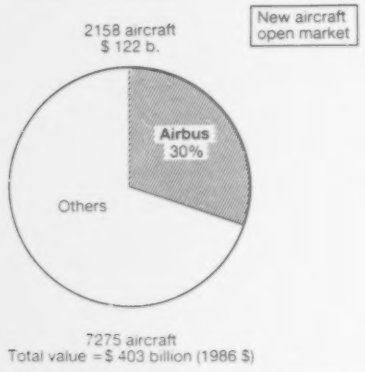
A300s and A310s are assembled on the same line.

Of the open market for new aircraft in this group, Airbus Industrie expects to gather a market share of 45%, equal to 912 aircraft. In dollar value, these aircraft will be equal to 49% of the $131 billion total market. That 49% equals $64 billion.

In the long-range category, the market is expected to be worth $181 billion. This is due to the relatively high cost per aircraft unit in this category. Airbus Industrie expects to deliver 490 of this type of aircraft (specifically, the A340-200 and A340-300), or about 25% of the market in numbers. In dollars, Airbus Industrie's percentage will be equal to 20%, or $37 billion of the total $181 billion available.

In total, Airbus Industrie expects to sell 2,158 aircraft, worth $122 billion dollars up to the year 2005. This works out to 29.7% of the aircraft sold, worth 30.3% of the total U.S. dollar value.

Airbus business share 1986-2005



Conclusions

Airbus Industrie is in the commercial aircraft manufacturing business because of the desire for and expectation of a profit. To this end, the consortium,like any other company, is driven and constrained by commercial decisions. The products must win market share as a result of their competitive qualities. Airbus Industrie believes it can be profitable by offering a superior product at a competitive price, and by constantly working to bring down manufacturing costs.

Airbus Industrie recognizes there are several other reasons for being involved in the aircraft industry. Among these are the technological spin-offs created by the research and development, the national and multinational price associated with being a leader in a knowledge-intensive, high-technology field, and the employment created by a successful endeavor. These, combined with the profit motive are strong incentives to working toward continued success in commercial aviation.

Success to any significant degree is not possible without a viable presence in the market in North America. The United States, with its huge airlines and 40% market share of the world's jetliners, will continue to be the critical area for commercial aircraft manufacturers. Airbus Industrie looks forward to the fair opportunity to continue to compete in that marketplace. ■

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ZUSAMMENFASSUNG

Marketing fuer zivile Flugzeuge in Nordamerika

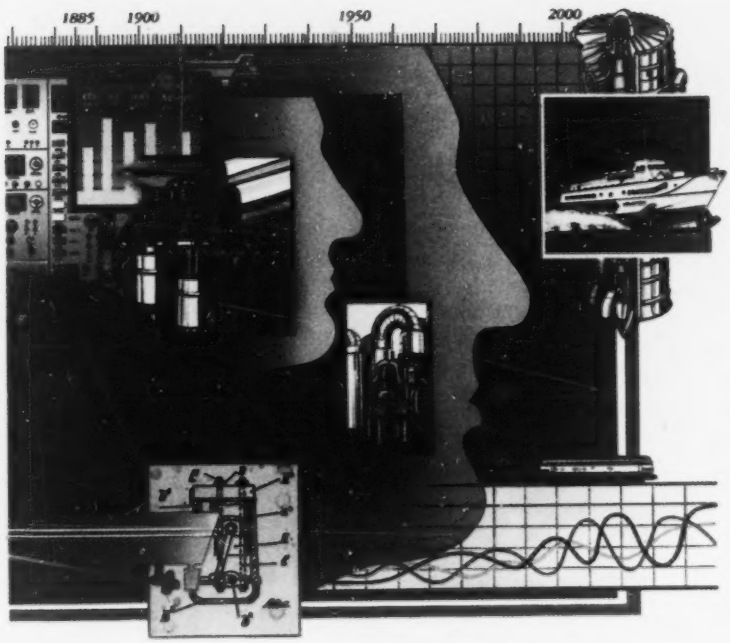
Der Markt fuer zivile Flugzeuge in den USA ist groesser als jeder andere sonst in der freien Welt. Airbus Industrie als europaeisches Herstellerkonsortium ziviler Luftfahrzeuge in einem von amerikanischen Firmen beherrschten Markt, begegnet besonderen Herausforderungen beim Marketing fuer seine Flugzeuge in Nordamerika. Daneben ist Airbus Ind. der juengste Einsteiger in einen Markt mit gut verschanzten Wettbewerbern. Unter diesem Zwang steht das Marketing der Airbus Ind. fuer seine zivilen Flugzeuge in Nordamerika.

Airbus Ind. hat erst kuerzlich angefangen Erfolg in den Vereinigten Staaten zu haben. 1976 waren in Nordamerika noch keine Airbus Flugzeuge im Einsatz oder in Bestellung. Eastern Airlines unterzeichnete 1977 einen Vertrag ueber 34 A300 (diese A300 Flotte ist immer noch die groesste der Welt) und dann gab es keine Bestellungen mehr bis 1985. Im Mai dieses Jahres bestellte die PanAm 12 A310 und 16 A320. Dieser Bestellung folgten Continental (A300) und American Airlines (A300-A600R) Ferner haben die Leasinggesellschaften GATX und ILFD Airbus Flugzeuge geordert.

Von einem Auftragsbestand von 34 Flugzeugen fuer 1984 hat Airbus Ind. eine Gesamtsumme von 181 verkauften Flugzeugen erreicht eine Steigerung von 433% in drei Jahren, Airbus Industries erwartet eine Fortsetzung dieses Erfolges auf dem US-Markt. Tatsaechlich ist es fuer jeden Flugzeughersteller, der im Markt wachsen will, notwending, sich in den Vereingten Staaten zu behaupten. Airbus Industrie erwartet, bis 1996 insgesamt 459 Flugzeuge an nordamerikanische Kunden ausgeliefert zu haben. Im Vergleich dazu waren bis zum Ende des dritten Quartals 1987 nur 67 Airbus Flugzeuge ausgeliefert,

Airbus Industrie betreibt das zivile Flugzeuggeschaeft aus dem Wunsch und der Erwartung heraus, Gewinn zu machen. Darum ist das Konsortium gezwungen, wie jedes andere Unternehmen nach wirtschaftlichen Massstaeben zu handeln. Die Produkte muessen Marktanteile gewinnen als Ergebnis ihrer Wettbewerbsfaehigkeit. Airbus Industrie glaubt, gewinnbringend arbeiten zu koennen durch das Angebot eines hochwertigen Produkts zu einem wettbewerbsfaehigen Preis und durch anhaltende Anstrengungen die Herstellungskosten herunterzudruecken.

Erfolg in erheblichem Umfang ist unmoeglich ohne eine lebensfaehige Praesenz auf dem US-Markt. Die Vereinigten Staaten mit ihren grossen Fluggesellschaften und 40% Marktanteil an Duesenflugzeugen sind die entscheidende Region fuer zivile Flugzeughersteller. Airbus Industrie wird versuchen, seine guten Chancen in diesem Markt durch Wettbewerb wahrzunehmen. ❑



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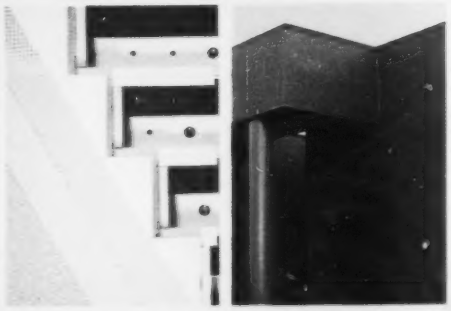

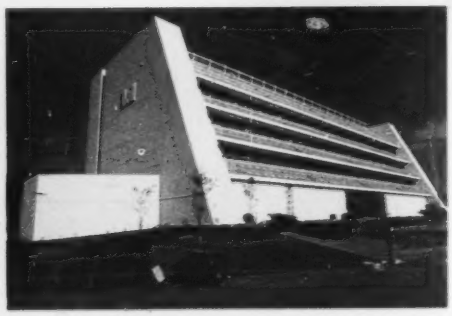

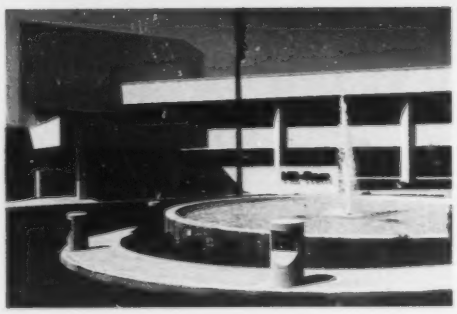

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Chief Executive Officer
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The merger between two of the largest construction firms in the world has, after nine years, proven to be a successful marriage in many senses. Not only have the two management styles mixed well, but the transfer of technology between Philipp Holzmann and J.A. Jones Construction Company has benefited both companies by allowing the expansion of construction horizons around the world. To understand how the merger developed and what has transpired in the ensuing nine years, it's important to look into the history of each company.

Philipp Holzmann AG has grown from a small family business into a worldwide leader in the construction industry. The firm was founded as a railway contractor near Frankfurt am Main in 1849 but quickly extended its activities to include civil engineering and building of all types. Holzmann received its first major contract outside Germany, the main railway station in Amsterdam in 1882, and since then has been active in many European countries, South America, Asia, and Africa. Holzmann how has major activities ongoing in the United States and quite a success story as one of the largest international construction companies in the world.

The company designs and erects public and commercial buildings, manufacturing and industrial plants, marine structures, and mass transit facilities. Holzmann's range of services includes turnkey projects which involve the planning and installation of all building and mechanical equipment, as well as the maintenance and operation of that equipment. Holzmann undertakes reconstruction and modernization of buildings and industrial plants and provides a full range of purchasing services at the client's request.

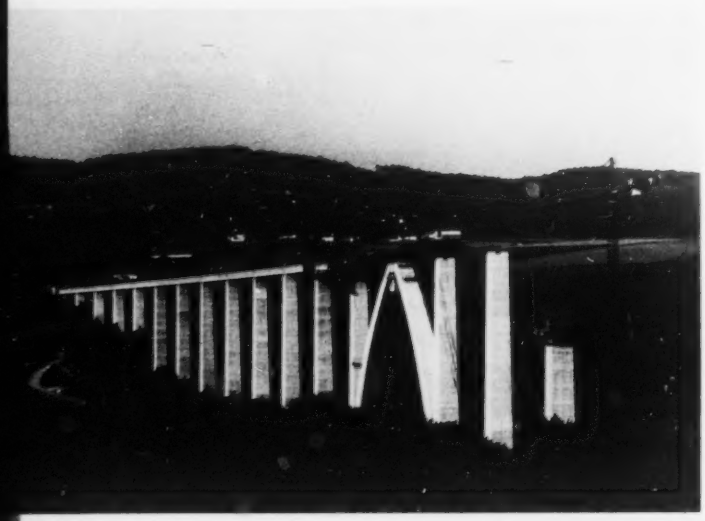
The general management and overseas departments of Philipp Holzmann are headquartered in Frankfurt, West Germany. The company operates thirty branch offices throughout Germany and has more than 50 domestic and foreign subsidiaries engaged in special fields of construction and construction-related activities around the world.

Holzmann Enters the U.S. Market

Holzmann is represented in the United States through its subsidiary, Philipp Holzmann, USA, by Jones Group, Inc. in Charlotte, North Carolina, and Lockwood Greene Engineers, Inc. in Spartanburg, SC, in addition to other subsidiaries. Jones is one of the leaders in the construction industry and Lockwood Greene represents the architectural and engineering side.

In 1986 the Holzmann group of companies had sales of DM 6.6 billion worldwide. Approximately 48% of that total is in the United States.

The decision to enter the United States construction and engineering market was a result of many events which took place around the world. Since its first international



Fulda Valley Bridge in the Federal Republic.

experience in the late 19th century when it began laying tracks and building railroad terminals around the globe, Philipp Holzmann AG has set corporate strategy by thinking far beyond German boundaries. In the earliest years, the Frankfurt-based company built the Amsterdam railroad terminal, the legendary Baghdad railroad, and the Dar-es-Salaam railroad in Africa.

By World War I, Holzmann had built the first high-rise skyscraper in Buenos Aires and entered the U.S. market with construction of the Barge Canal in New York. More recently, its activities centered on the Middle East where some of the world's largest construction projects have been built with oil revenues, for example, hospitals and the sports stadium in Saudi Arabia.

In the early 70's, more than 50% of the company's foreign revenues came from Saudi Arabia, But the Iranian revolution, Iran-Iraq war, and the softening of oil prices made the prospects of a blooming construction market in the Middle East seem less promising.

Holzmann carefully evaluated the possibility of future construction market collapses and, in order to protect the company from such uncertainties, management decided to diversify risks by investing in other countries. Economic and political stability and a self-sustaining market were the main factors in reentering the largest construction market in the world, the United States. Holzmann sought a company that would complement their own long history and well-respected reputation, and in 1979, acquired the Charlotte-based J.A. Jones Construction Company which included 90 years of experience in the U.S. construction industry.

Buying Reputation and Experience

J.A. Jones Construction Company has its own history and many successes of which to be proud. Founded in Charlotte, North Carolina, J.A. Jones has grown to become a U.S. and international construction leader. Mr James Addison Jones started his work as a bricklayer in 1890, and got most of his early experience building for the textile industry throughout the southern states. Interestingly enough, though, J.A. Jones' first project, like Holzmann's involved the railroads. Mr. Jones built the dining car facility in Charlotte for Southern Railroad Company.

The textile industry's growth allowed for such expansion of the Jones Company that soon the firm was building most of the large structures throughout the Carolinas, including the Southeast's first skyscraper, the 12-story Independence Building in Charlotte.

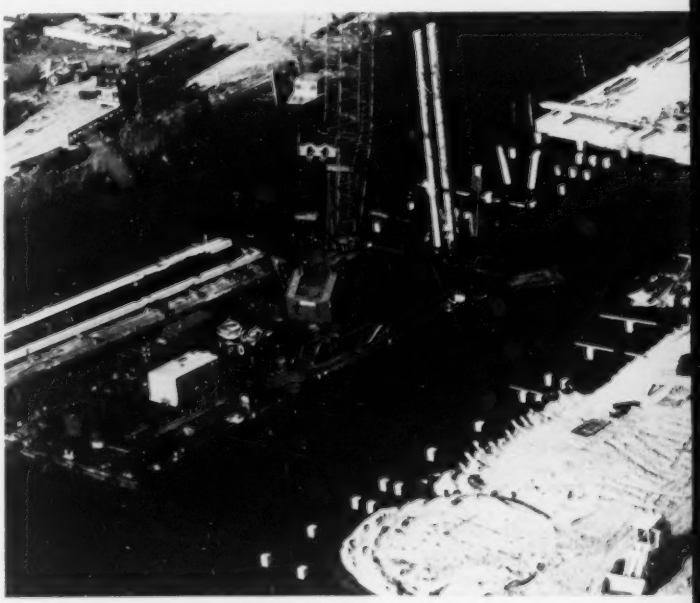
In the 1930's, following the Great Depression, Jones received one of the largest construction contracts to that date, for a new military air base in the Panama Canal Zone.

Holzmann received its first major contract outside Germany, the main railway station in Amsterdam, in 1882...

Since that project, military construction has been an important part of Jones' history, including the construction of Liberty ships during World War II, followed by what was then the largest construction project in the history of the world, the gaseous diffusion plant at Oak Ridge, Tennessee.

Following the war years, Jones began a long series of heavy and highway construction work while continuing the successes of the commercial building throughout the country. And today, the company is also involved in industrial and energy work as well.

Since the histories of both Philipp Holzmann and J.A. Jones have paralleled world events, it was only natural for the two companies to want to share technologies and philosophies for the betterment of both firms. As international travel and trading reduced the size of the globe, the national boundaries began to disappear and networking between countries started to become a way of life. In fact,



Elizabeth River Tunnel, Portsmouth, VA.

National Gallery of Art, Washington, D.C.

Holzmann and Jones had competed against each other for years and had pursued work as a team before taking on a military training center project in Saudi Arabia as a joint venture.

So, in October of 1978, J.A. Jones Construction Company announced its agreement to be acquired by Philipp Holzmann AG. During that year a number of other large construction and engineering companies had been pursued by foreign investors, but Holzmann's acquisition of J.A. Jones

The company operates thirty branch offices throughout Germany and has more than 50 domestic and foreign subsidiaries.

was very much an historic step toward internationalizing the industry. The purchase ended an innovative plan by Jones to be employee-owned which had begun in 1968, but the stockholders were assured that the firm's name, management and work force would not change. And now Holzmann is represented only on the board of directors.

At the time of the purchase, Jones' stock price was valued at $23.06 per share, which was determined by the company' own estimate of its value, since the stock was not widely traded. Holzmann's offer amounted to $40.61 per share. Although it was stated that several other companies had an interest in the purchase of J.A. Jones, Holzmann's offer was accepted, according to Johnie H. Jones, then executive vice president and now Chairman and President of Jones Group, Inc., "because the philosophy and integrity of Holzmann's management were most compatible with the Jones team."

Making Sense of the Merger

Three primary reasons were given for the merger: 1) The financial strength of Holzmann would enable Jones to resume its growth and continue to grow faster, 2) The merger would allow Jones access to the larger firm's technology, and 3) the combined international experience of the two companies would better the competitiveness in foreign markets. At that time Holzmann spent more than $3 million a year on research and held several patents in concrete technology.

It is especially interesting to look back on the Holzmann-Jones merger and management's expectations to see how the companies have actually fared over the nine years.

The Holzmann-Jones partnership has allowed both companies to bid on a greater variety of projects because

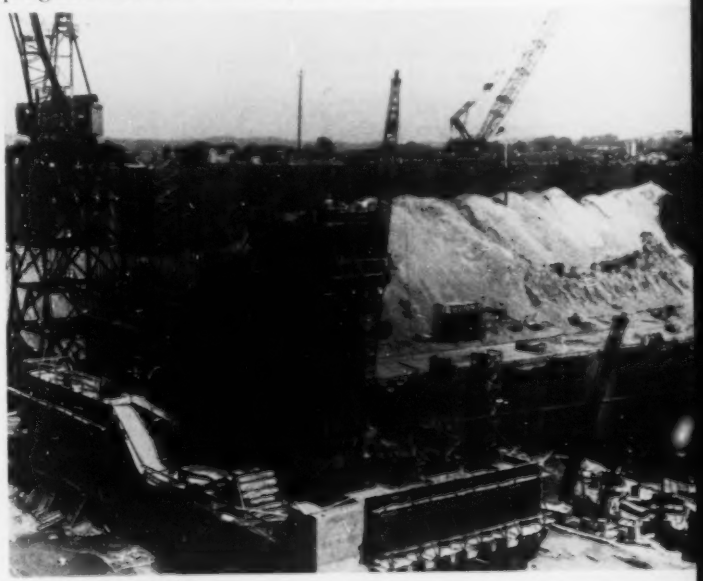
To further diversify in America... Holzmann in 1981 purchased 80 percent of Lockwood Greene Engineers, Inc....

of both a more comprehensive market presence and the shared technologies. In addition, the financial strength of Holzmann has enabled Jones to increase its volume of work and the size of its projects, while continuing to work with unlimited bonding capacity.

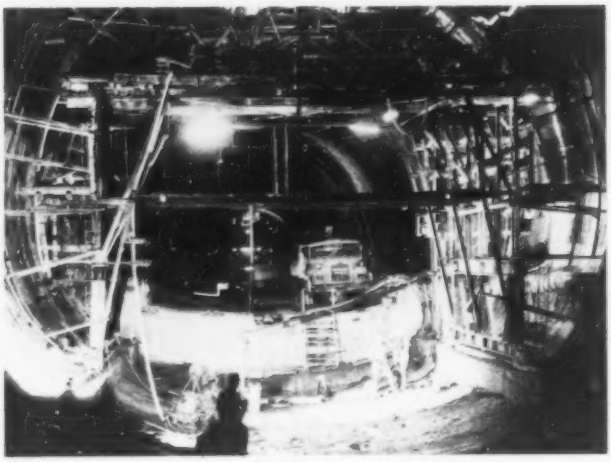
Benefits of the merger surfaced early. Jones became more competitive in the heavy construction field, an area where Holzmann had for decades been a world leader, and entered-with gusto—the marine industry with a sunken tube tunnel contract and one for a floating pontoon bridge. Holzmann gained expertise in the chemical plant market and in high-rise construction, long a staple of J.A. Jones' construction successes, but at the time a much more costly type of construction in Germany.

To further diversify in America and capture earnings in design and engineering and non-construction areas, Holzmann in 1981 purchased 80% of Lockwood Greene Engineers, Inc. of Spartanburg, S.C. Holzmann also encouraged Jones Group's formation of a new service company, Jones Operations and Maintenance Company, which specializes in facilities management, similar to one Holzmann founded in the early 1980's.

The two companies have set up an informal employee program which enables young engineers to travel and work somewhat like exchange students abroad. Management level staff members also take part in orientation programs between Germany and the U.S.



Cannelton Dam in Ohio.



Holzmann's construction of the Rauheberg Tunnel.

J.A. Jones has added a dimension in international construction that has benefitted their parent company. By offering procurement services for materials for projects where many of the designs call for American standards, Jones can help Holzmann bypass any problems of selecting goods in a foreign country.

In turn, Johnie Jones says that Holzmann "does not interfere with our operation but provides support. In keeping our management intact, it proved to us that Holzmann agreed with our philosophy that people are our most important assets." The Jones company—because of Holzmann's confidence in Jones' people—has taken on major heavy construction projects which heretofore would have only been undertaken as a joint venture. And in a totally new direction, Jones signed its first contract to build, own, and operate a lignite mine in Louisiana. "It required a substantial investment in the beginning but we wouldn't have been able to do it without the financial support of Philipp Holzmann." The success of this 25-year project has already let to another privatization project, this one for the U.S. Army at Ft. Drum in New York State.

Both companies are in the process of diversifying, not only in the technical field but also in the type of construction supporting operations. They are also expanding into other locations to establish better positioning in the international market. The formation of a real estate development company in Atlanta, Mark III, and additional activities from Queens Properties, Inc., in Charlotte, a subsidiary of Jones Group, were further steps toward this diversification.

Because the financial techniques of construction firms have taken a front seat in many projects, Jones Group this year formed Jones Capital Corporation to develop other project-financed facilities and to hold the assets of projects in which Jones is maintaining an ownership position.

While still very much separate entities, Holzmann and Jones are getting to know each other much like relatives who haven't seen each other in years. The industry is the same in both countries, but personalities and customs differ. The two companies view these differences as advantages instead of disadvantages and are marketing their team worldwide. Together, Holzmann and Jones are now pursuing one of the largest construction projects in the world in joint venture partnership. ■

ZUSAMMENFASSUNG

Aufbau einer internationalen Verbindung

Die Verbindung zwischen zwei der groessten Baufirmen der Welt hat nun—nach neun Jahren—sich in mancherlei Hinsicht als erfolgreiche Ehe herausgestellt. Nicht nur die Management-Stile haben sich gut gemischt, auch vom Transfer der Technologie haben beide Firmen profitiert, da er ihnen eine Erweiterung der Bau-Horizonte rund um die Welt ermoeglichte.

Holzmann wird in den USA durch seine Tochtergesellschaft Phillip Holzmann USA vertreten sowie durch die Jones Group Inc. in Charlotte, North Carolina, ferner durch Lockwood Greene Engineers Inc. in Spartanburg, South Carolina in Verbindung mit jeweiligen Tochtergesellschaften. Jones ist fuehrend in der Bauindustrie waerhrend Lockwood Greene den architektonischen und ingenieurmaessigen Teil vertreten. 1986 hat die Holzmann Firmengruppe 6.6 Mrd. DM Umsatz gemacht. Annaehernd 48% davon in den USA.

Die Holzmann-Jones Partnerschaft erlaubt beiden Firmen bei einer groesseren Zahl von Projekten mitzubieten. Einerseits wegen der verbreiterten Marktpraesenz zum anderen wegen der gemeinsamen Technologie. Dazu kommt die finanzielle Kraft von Holzmann, die Jones in die Lage versetzt hat sein Arbeitsvolumen und die Groesse der Projekte zu erweitern.

J.A. Jones hat eine neue Dimension in das internationale Konstruktionsgeschaeft eingebracht von der die Muttergesellschaft profitiert. Durch seine Materialbeschaffungsdienste fuer Projekte die haeufig amerikanische Designstandards zugrundelegen, kann Jones Probleme fuer Holzmann bei der Material auswahl im Auslandsgeschaeft vermeiden.

Waehrend sie eigentlich noch sehr eigenstaendige juristische Personen sind, kommen sie doch zusammen wie alte Bekannte, die sich einige Jahre nicht gesehen haben. Die Branche ist die gleiche in beiden Laendern aber die Mitarbeiter und Kunden sind unterschiedlich. Die zwei Firmen sehen diese Unterschiede aber als Vorteil und nicht als Nachteil an und machen gemeinsam das Marketing fuer ihr Team weltweit. ❑

A century ago Edison gave us his name and his patents. It turned into one of his brightest ideas.

Thomas Alva Edison, a true American genius, did more for the world than on the lights. As an originator of the light bulb, microphone, phonograph and movie camera, he could be called. The Father of Modern Technology. (Photograph: German Museum, Munich)

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AEG's flexible automation systems: they boost production, cut energy costs and improve quality by providing numerous components with electronic intelligence that enables them to intercommunicate. This allows human workers to take up more challenging jobs than just looking after machines.

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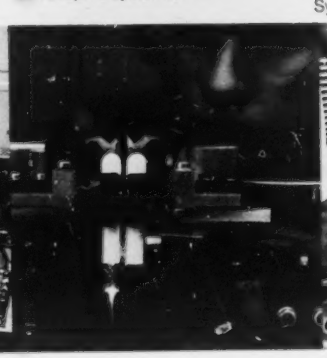

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The name is Siemens.

Wettbewerb bei Spezial-Chemikalien: eine weltweite Aussicht

Competition in Specialty Chemicals: A Global Perspective

Dieter H. Ambros
Executive Vice President
Henkel KGaA

Specialty chemicals, like many other industrial products today, must be viewed from a global perspective. Bought for performance rather than composition, they were long thought to be immune to the competitive forces which beset their internationally-traded commodity counterparts. But ease of communication and travel, rapid dissemination of technology and widespread insistence on high standards of product quality and service have forced specialty chemical suppliers to recognize that—if they are to survive and prosper—they too must do business on a multi-national scale.

At Henkel we have developed an operating philosophy and global strategy for building and managing an amalgam of specialty chemical businesses that is rooted in our heritage. Over the years we have learned what does or does not work for us. We have succeeded, we believe, because we have continuously strived for a competitive edge locally and internationally, focusing on areas we know and understand. We have failed when we diversified too quickly into areas where we had no experience. All our executives share this understanding and so do their people.

First, some history. Henkel, with nearly $5 billion in worldwide sales and 35,000 employees in 48 countries, was founded 110 years ago by a very practical, innovative businessman who gave the enterprise its name—Fritz Henkel. He identified and grasped an opportunity to give housewives an effective laundry detergent which greatly improved and eased the washing process. He discovered some basic principles which were instrumental in building the business:

- Provide a consistently high quality product differentiated from its competitors by performance.
- Work with customers to use it properly and effectively.
- Brand it. Promote it heavily. Sell it with enthusiasm.
- Price it to reflect its value to the user, not its cost of manufacture.

This product evolved into Persil (perborate + silicate), today the number one home laundry detergent in Germany and a market leader elsewhere in Europe. It is premium-

...Henkel now markets not only specialty chemicals and formulations but complete systems including dispensing and control equipment and consulting services.

priced and enjoys a reputation for working effectively and consistently. So much so that it has attained the top position in many export markets, e.g., Israel. Today's product is, of course, not what we started with. It has evolved as user needs changed, environmental concerns surfaced and washing machines improved.

Out of this experience has come our key adaptation strategy: Identify market trends; modify products accord-

ingly; work closely with equipment makers to ensure optimum results; and advertise heavily. But sometimes regional preferences differ so greatly that mere modification will not suffice. Thus Persil has been found effective only in European high speed, side loading machines. It is unsuitable for use in the United States where others have developed high foam formulations that work better in low speed, top loading machines. So we have confined it largely to Europe where its market presence has been buttressed by the addition of other household products aimed at the same buyer.

Henkel Goes Global

While Persil did not provide Henkel with a vehicle for global growth, it did lead the company into another business which is now conducted on a worldwide scale. Originally, Persil was based on inorganics—sodium perborate and sodium silicate—and soap. As sales grew and concerns

While "Persil" did not provide Henkel with a vehicle for global growth, it did lead the company into another business which is now conducted on a worldwide scale.

arose over an assured supply of fatty acids, Henkel backintegrated into the production of soda ash and oleochemicals. As these capacities—sometimes temporarily—exceeded growing captive demand, we became not only a merchant supplier but an aggressive developer of new applications for fatty acid derivatives. Our knowledge of detergent technology soon brought us into such forward markets as industrial and institutional cleaning, textile auxiliaries, fatty alcohol surfactants for cosmetics and toiletries, and metal cleaning compounds.

Interestingly, our entry into metal cleaning resulted from a visit of Fritz Henkel's son Hugo to the U.S. in 1928. His report is a classic example of the first step in successful commercial development:

The Process Chemical unit, acquired by Henkel in 1987, is a pioneer in defoamer technology.

> "It is absolutely astonishing to one viewing it for the first time to see the fantastic amounts used to clean metal in machine factories, especially in the automobile industry. The finished engines and stamped sheet metal are rinsed and sprayed with a phosphate solution. After that, all parts of the car are coated with spray paint. For us, this means we must research the matter and perhaps come up with a special product. In any case, a product for cleaning bottles, dishes and metal...would appear to be of great interest to us."

The first products—branded P-3—for use in industry and agriculture reached the market in 1929. Microbiology laboratories were set up, research in relevant fields intensified, and last but not least, several companies were acquired to make their technologies available to Henkel. Today, this group offers not only products for cleaning metal surfaces but corrosion inhibitors, processes for passivating steel, anodizing aluminum and degreasing polymeric coatings.

Whether for machine or automobile manufacture, for milk production, for food and beverage plant sanitation or for corrosion inhibition, Henkel now markets not only specialty chemicals and formulations but complete systems including dispensing and control equipment and consulting services. This is an example of controlled diversification, of a feel for new areas of business adjacent to those we know well.

Structure and Profile

Where are we now? Today, the Henkel Group has three distinguishing characteristics:

(1) Henkel is a specialist in applied chemistry.
Through its 110-year history, Henkel has evolved from a producer of household detergents, the P&G of Germany, to a broad, chemically-based group of companies which focus on recognizing and understanding consumer and industrial needs, and developing products and support systems to satisfy them. Even though Henkel continues to produce some basic chemicals like soda ash, silicates and oleochemical commodities, emphasis is clearly placed on the development of specialty chemicals for use by many industries and the consumer, as well as full technical service support to assure the customer of optimal use of our products, thus tying him to us in a close, on-going relationship.

We view ourselves as co-responsible for our customer's performance and his added-value, by contributing what we know best. We constantly communicate to our employees a common operating philosophy: our customers' needs must be satisfied with quality products and services, and where justified, with appropriate equipment.

(2) Henkel is an open family company.
Fritz Henkel, the founder, had two sons and a daughter who passed the ownership of the company on to their descendants. Ownership and control are now vested equally in the three family branches.

each of which has one vote on key issues. Until 1985, the family held 100% of all common stock, even though no family member now participates in the company's management. In that year, they decided to open the company to the public by selling preferred, non-voting shares, with two objectives in mind:

- Broaden the company's financial base by bringing in additional equity. The initial public offering raised DM 400 million. Additional shares, authorized at the time, may be issued as needed to raise another billion marks or over $500 million at today's rate of exchange.
- Retain control in the hands of the family. While the preferred stockholders cannot vote, they do receive a higher dividend on their shares.

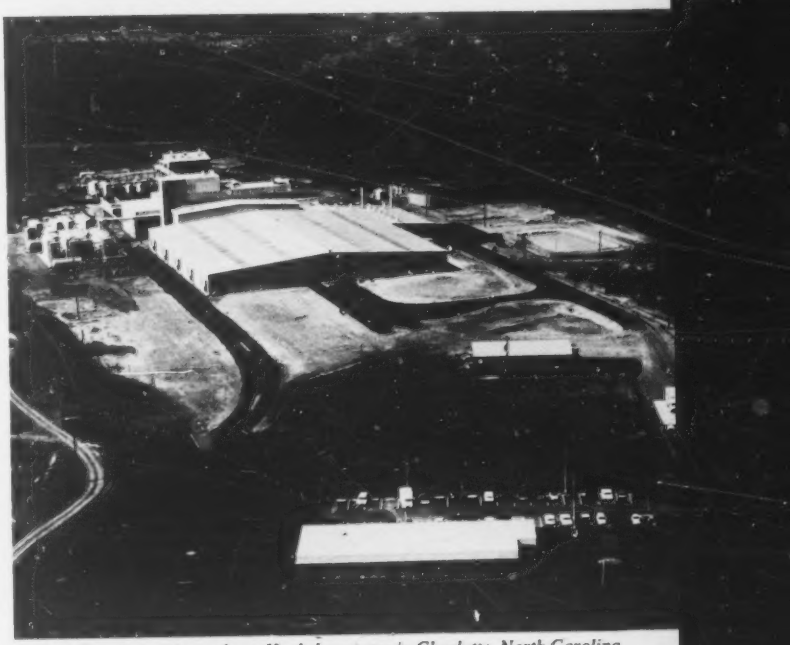
(3) Henkel is an international company.
In 1975, domestic German sales constituted slightly more than half the total turnover, Today, they represent only a third. Exports have increased somewhat, from 6% to 9%. More significantly, operations in 46 other countries have increased from 43% sales in 1975 to 57% in 1986, with three-fourths coming from Europe and the rest from the Americas, Australia, Asia and Africa. The United States currently accounts for 9% of world sales. In 34 of the 48 countries where Henkel is represented, we operate our own production plants, often at multiple sites.

In 1975, domestic German sales constituted slightly more than half the total turnover.

We realize that this complex international network can no longer be managed by one central organization calling all shots from one national point of view. Instead, Henkel headquarters in Duesseldorf works through individual operational and functional groups to establish worldwide strategies and guidelines. These groups are made up of divisions with worldwide responsibility for product strategy and technology. In Germany, they also have direct responsibility for marketing and sales. In the rest of the world, they work hand-in-hand with the respective country executives and business managers. The matrix operates at highest efficiency. His mentor/tutor is a member of the Henkel Management Board.

Corporate Strategy

The worldwide strategies of the operating units and guidelines set by functional units in Henkel's Duesseldorf headquarters are meant to be a framework which each local organization is expected to adopt, adapt and modify as needed to optimize Henkel's regional market presence. Keep in mind that local operations are held responsible for their results. Duesseldorf provides the guidelines (e.g., maintain high quality) and resources (e.g., technical innovations, new products, manufacturing know-how and funds). It is up to the local organization to determine how best to utilize these tools in the market place for optimum return.



Aerial view of one of two plants Henkel operates in Charlotte, North Carolina.

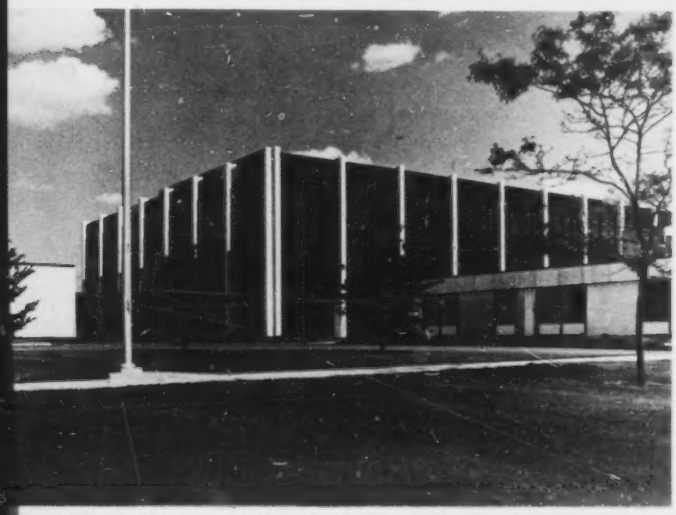
These guidelines could, for example, define target segments of a served industry. They might be areas where we have a competitive edge because of our chemical base (oleochemicals), our technology, our reputation or our customer knowledge. The accumulated experience gained in Germany and the worldwide network of companies is openly shared.

Often headquarters suggests new product ideas which might be transferable, with adaptation, to meet local needs but which could not be economically duplicated in smaller, decentralized laboratories. Along with clear definitions of areas where local companies should push come restrictions on areas where we shouldn't—textile dyestuffs, for example—where we have nothing to offer.

The local business manager has profit/loss responsibility and a charter to maintain and grow his business through adaptation of central headquarters guidelines to his local situation. It is his job to use the resources put at his disposal by headquarters and to exercise his own initiative to carve out an optimal market position and achieve optimal manufacturing costs.

The local business manager has profit/loss responsibility and a charter to maintain and grow his business through adaptation of central headquarters guidelines to his local situation.

There are two exceptions to this German center concept—both in the United States. Our Amchem/Parker metal surface treatment business is based in the U.S., whence it sets forth guidelines for other Henkel affiliates in Mexico, Canada, Australia, Singapore and Brazil. Also, our natural



Process Chemical is headquartered in Morristown, New Jersey.

Vitamin E business, derived from the acquisition of General Mills Chemicals, coordinates from the U.S. all related activities in Europe, Australia and Japan.

To maintain this international way of thinking, ensure access to new worldwide technology and continually reinforce a worldwide team approach, we exchange key people to and from Germany and among the Henkel companies. We actively involve them wherever they are sent, making sure that they and their families become bi- or better yet multi-lingual.

One of the main benefits of centralized, consistent guidelines has been a consistency of Henkel products, no matter where in the world they are made or sold. This principle allows us to serve the growing number of customers which are themselves becoming international using the same logic as Henkel—a broader base from which to conduct business, a lower vulnerability to shifting rates of exchange and national policy.

As we expect to obtain raw materials of consistent quality anywhere in the world, so do our customers. And we are in a position to respond. In this way, sister companies can back up each other, as our Norwegian facility, for example, supports our British company by supplying paper chemicals to a Finnish mill. The customer is assured of a dual source of supply for the same products.

It is up to the local organization to determine how best to utilize these tools in the marketplace for optimum return.

However, even though Peter Drucker has claimed that "the developed world has become one in terms of technology," a statement I do not question, many local needs are different. This is a question we must address. While we live in a world where information is readily available to all, friend and foe alike, habits and consumption patterns are still set regionally—household detergents being one example.

Enough on operating philosophy! Now how do we address growth? Simply stated, we build from positions of strength. We avoid what we do not understand. We move gradually into new areas. If we are currently serving a market, we search for other ways of serving it. if we are active in a technology, we look for other areas in which to apply it. You will not, however, find us jumping into new products and new markets at the same time. We work hard at communicating and transferring knowhow within the Henkel Group, and often work in partnership with other companies whose interests/skills complement our own.

Nonetheless, a sizeable part of Henkel's growth has come through acquisitions. We have viewed them as a means of strengthening our own technology, production and marketing capabilities, locally and internationally.

The American Experience

In the United States, we started in 1960 with the purchase of Standard Chemical, which brought us two textile auxiliary plants in Hoboken and Charlotte. In 1977 we acquired General Mills Chemicals, which introduced us to several new business areas—water soluble polymers, polyamide resins, mining and oilfield chemicals, and natural Vitamin E. Three years later, we bought Amchem Products, formulators of metal surface treatment products which fit nicely with our P-3 line. In so doing, we learned some important lessons:

We expanded staff and overhead too rapidly, assuming that the rapid growth of the early years would continue indefinitely.

- We did not fully understand these businesses at the outset, thus could not take proper action when problems arose.
- We left the acquired people alone, allowing them to take actions inconsistent with Henkel's worldwide strategy.
- We failed to establish a common business philosophy, making it very difficult to communicate with each other or to reach internal agreement on objectives, strategies and tactics.

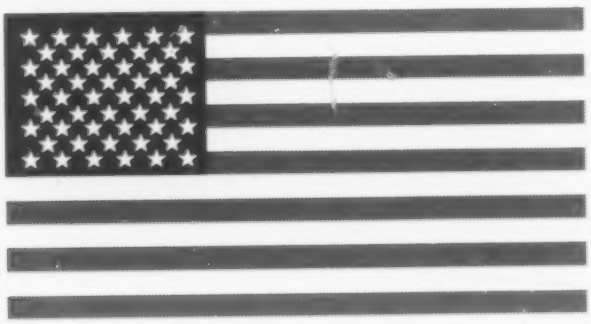
We fell into another trap in building the U.S. company. We expanded staff and overhead too rapidly, assuming that the rapid growth of the early years would continue indefinitely. We got ahead of ourselves. We also began losing touch with the market by not making decisions at the business/customer interface where they belong.

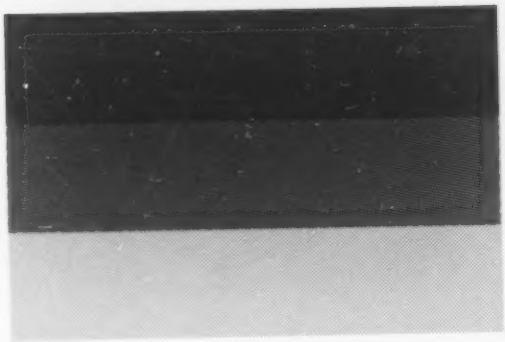
In 1985 we acted. We spun off peripheral businesses, moved out of redundant, high-cost sites, put responsibility for making day-to-day decisions at the business level, and sharply cut the corporate and administrative staff, eliminating unnecessary expense.

We then set out to acquire again, but with a clear purpose. We wanted to re-establish an American company of competitive size, to locate technology which we understood and which would complement ours. We wanted organizations which we understood and would understand us. We wanted market positions which would fit ours or, if new, would depend on technology familiar to us. We also

BEFORE MAKING AN M&A MOVE OVER THERE,

THERE ARE SOME PEOPLE YOU SHOULD TALK TO RIGHT HERE.





Acquiring a U.S. company can be a winning strategy for German firms that want to strengthen their competitive positions worldwide and enlarge market share.

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Ever since the computer conquered the shop floor our future in machine tool construction has had to follow a clear-cut programme.

Because controlled by a computer MAHO machine tools can mill and bore their way to a higher level of productivity than was attainable with conventional, manually operated machines.

As early as 1977, i. e. a lot sooner than most, we equipped all our machines with the new toolmaker's tool – the computer.

This required a great deal of courage. And a great deal of money. And it has paid off.

From then on our progress has been steep. While, for example, in 1976 our sales amounted to 60 million DM we are now poised to pass the 400 million mark.

All over the world, more and more MAHO machines are making more and more products from steel, other metals and plastics – from watch cases and camera components right up to

HILDEMANN, SIMON, REMFER & SCHMITZ/SMS

uch weightly items as aerofoil ections or engine blocks.

A fair share of the corporate rofits made in the process is loughed straight back into &D. For example, in addition production technology we are lso investing heavily in design nd planning. CAD, computer-ded design at the interactive DU, will oust drawing boards nd compasses in the future.

Our new ideas certainly got things moving in the machine tool market. And they have also made our customers nimbler on their feet.

Because anyone who can produce the goods faster and can respond more flexibly to customer needs will not stand still. But move briskly ahead – like us.

MAHO

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wanted, if possible, to find businesses of international scope that would enhance our position outside the U.S. We found two such properties. Diamond Shamrock's Process Chemicals and Ford's Parker Chemicals. Both deals were consummated in early 1987.

Since then we have concentrated on merging these groups into Henkel—not taking them over but integrating them and their key people into an effective working team with their Henkel counterparts. The results so far have been gratifying.

Having reached a competitive critical business mass in the U.S. and restored the American company to profitability, we are now positioned to pursue more conventional growth strategies.

In making these two large acquisitions we discovered two additional competitive strengths of the Henkel Group:

- An ability on short notice to form inter-disciplinary teams empowered to make decisions on negotiating points without having to go back to headquarters for approval.
- The confidence and support of the Management and Shareowners Boards based on a shared understanding of objectives and strategies underlying the acquisition effort.

This ability to move fast, despite transatlantic distances, gave us a distinct advantage over others pursuing the same properties.

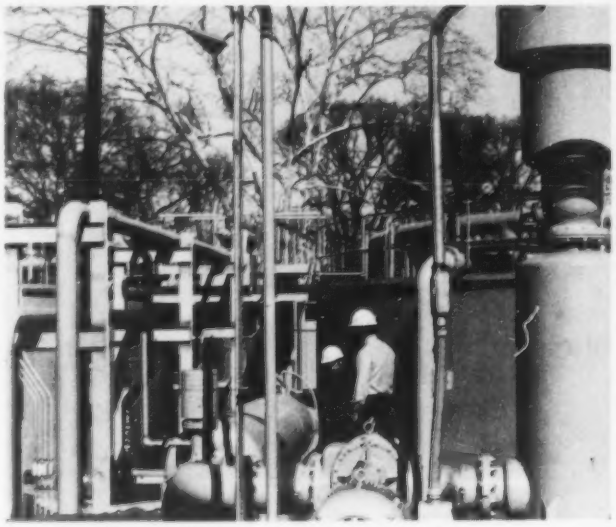
Having reached a competitive critical business mass in the U.S. and restored the American company to profitability, we are now positioned to pursue more conventional growth strategies. Thus we have set up Henkel Research Corporation in Santa Rosa, California to provide us with a window on biotechnology of value to our future products. This facility is linked directly to Henkel Central R & D in Duesseldorf to ensure that its view is global and not unduly swayed by local short term market demands.

We recognize that we must do a better job of discerning market trends over the medium term and translating them into improved products, services and systems. We have substantial emerging technologies in Europe which may fit American market needs. These could serve as the basis for entirely new businesses in which we do not yet engage in the U.S.

We certainly cannot do all of this alone. There may be potential partners based in the United States with whom we can work to create enterprises of worldwide scope. We are flexible, we are accustomed to allying ourselves with others in pursuit of a common goal. Witness, for example, the recent creation of the Aqualon Group, a joint venture with Hercules, as well as our earlier investments in Clorox and Loctite.

In summary, we at Henkel have learned much in the past 110 years about building and operating successful international businesses. The principal lessons are these.

- Understand and serve customer needs.
- Provide consistently high quality, state-of-the-art products, services and systems differentiated through performance.
- Promote, market and price them aggressively to reflect the value they add to your customer's products and processes.
- Expand and diversify into new markets and/or technologies only from positions of strength.
- Acquire only those businesses which you are sure you understand and which will lead you where you want to go.
- Set up guidelines and growth strategies centrally; manage individual businesses locally.
- Nurture a common corporate culture.
- Where financial, technology or market requirements dictate, find a good partner. ■



Part of an effluent clarification system at a Henkel plant in Charlotte, North Carolina.

ZUSAMMENFASSUNG

Wettbewerb bei Spezial-Chemikalien: eine weltweite Aussicht

Spezialchemikalien, wie viele andere Industrieprodukte muessen heute aus einer globalen Perspektive betrachtet werden. Man glaubte lange Zeit, sie seien immun gegen Wettbewerbskraefte, denen die sonstigen international gehandelten Rohstoffe ausgesetz sind. Aber Kommunikation, Reisen, rasche Ausbreitung der Technologie, weitverbreitetes Draengen zu hohen Produktstandards und Service hat die Lieferanten von Spezialchemikalien gezwungen einzusehen, dass auch sie ihr Geschaeft in einem internationalen Massstab betreiben muessen, wenn sie ueberleben und sich entwickeln wollen.

Im Hause Henkel haben wir eine Geschaeftsphilosophie und eine Globalstrategie entwickelt um ein Geschaeft mit einer Mischung an Spezialchemikalien—unserem angestammten Geschaeftsbereich—aufzubauen und zu leiten. Im Laufe der Jahre haben wir gelernt, was fuer uns gut ist und

was nicht. Wir sind erfolgreich—so glauben wir—weil wir unaufhoerlich nach Wettbewerb gestrebt haben, national und international, und uns dabei auf Bereiche konzentriert haben, die wir kennen und von denen wir etwas verstehen. Wir haben versagt, dort wo wir zu schnell in Bereiche diversifiziert haben, in denen wir keine Erfahrungen hatten. Unsere Fuehrungskraefte teilen diese Auffassung genauso wie deren Mitarbeiter.

Nachdem wir einen wettbewerbsmaessig kritischen Geschaeftsumfang hatten und nun die amerikanische Gesellschaft zur Rentabilitaet zurueckgefuehrt haben, sind wir nun in der Lage konventionellere Wachstumsstrategien zu verfolgen. Dazu haben wir die Henkel Research Corp. in Santa Rosa, Kalifornien gegruendet,die uns den Zugang zu wertvoller Biotechnologie fuer unsere zukuenftigen Produkte liefert. Diese Einheit ist unmittelbar mit der Henkel Zentrale in Duesseldorf verbunden, um sicherzustellen, dass ihre Arbeit weltweit ausgerichtet ist und nicht von kurzfristigen lokalen Marktwuenschen unguenstig beeinflusst wird.

Wir wissen, dass wir unsere Arbeit beim Erkennen von Markttrends im mittelfristigen Bereich und der Umsetzung in verbesserte Produkte und Systeme noch verstaerken muessen. Wir haben neuentwickelte Technologien in Europa, die amerikanische Markterfordernisse erfuellen koennten. Dies koennte die Basis fuer voellig neue Geschaefte in den USA sein, die wir bisher noch nicht betrieben haben.

Wir koennen sicherlich nicht alles alleine machen. Es gibt potentielle Partner in den Vereinigten Staaten, mit denen wir zusammen Unternehmen von weltweitem Zuschnitt aufbauen koennten. Wir sind flexibel, wir haben uns daran gewoehnt uns mit anderen zur Verfolgung gemeinsamer Ziele zu verbinden. Beweis dafuer ist z.B. die juengste Gruendung der Aqualon Group, einem Joint-Venture mit Hercules, genauso wie unsere bisherigen Investitionen Clorox und Loctite.

Alles in allem haben wir bei Henkel in den zurueckliegenden 110 Jahren viel gelernt, wie man ein internationales Geschaeft erfolgreich aufbaut und fuehrt. Die Grundprinzipien sind:

- Verstaendnis und Erfuellung der Kundenwuenche
- Bereitstellung konstant guter Qualitaet, modernster Produkte, Dienstleistungen und Systeme, die sich durch Hoechstleistung unterscheiden
- Promotion, Marketing und Preis sollten aggressiv sein um den Wert herauszustellen, den sie den Produkten oder Prozessen des Kunden bieten.
- Expansion und Diversifikation in neue Maerkte und/ oder neue Technologien nur aus einer Position der Staerke
- Einstieg nur in Geschaeftsbereiche, die bekannt sind und deren Richtung passt.
- Zentrale Aufstellung von Richtlinien und Wachstumsstrategien, Fuehrung des einzelnen Unternehmens vor Ort.
- Pflege einer gemeinsamen Unternehmenskultur
- Suche nach guten Partnern, dort wo finanzielle, technologische oder markttechnische Gesichtspunkte es vorschreiben. ❑

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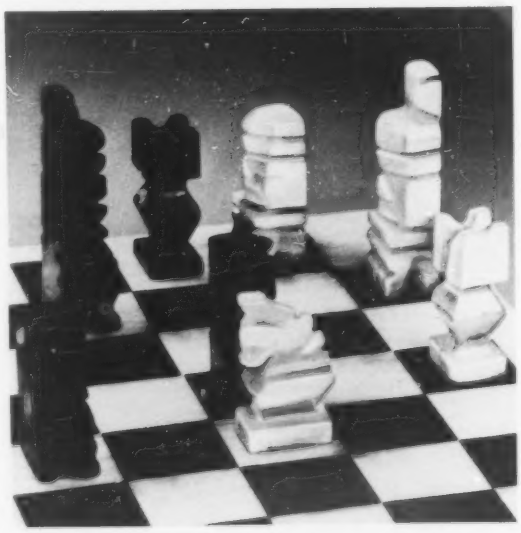

The successful development of many companies has gone hand-in-hand with strategic support from merchant bankers.

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Eine konservative und langfristige U.S.-Investition

A Conservative U.S. Investment Approach for the Long Run

Hermann Freudenberg
Freudenberg & Co.

Pellon Corp., Disogrin Industries Corp., International Packing Corp., Escan Corp., The Lutravil Co., Simrit Corp., Nora Flooring Systems, Inc.—none of these names sound very German, but nonetheless they all form the Freudenberg group in the United States.

Freudenberg's head offices are located in Weinheim, West Germany. The company was founded in 1849 by Carl Freudenberg, and today employs 24,000 people worldwide in more than 60 manufacturing plants and 70 other locations in 22 countries. The production program consists of a broad variety of products using rubber, plastics, metal and fibers as their main elements. The automotive and capital goods industry accounts for more than 54% of the total business, followed by apparel, footwear, leather goods and wholesale/retail consumer products.

Getting a Foothold

In 1950, Freudenberg founded its first American manufacturing facility in Lowell, Massachusetts under the name of Pellon. This unquestionably became one of the first German companies in the United States after World War II. Massachusetts at that time was still an important textile state and best suited Freudenberg's nonwoven textile fabric production requirements. Today the trade name Pellon is synonymous for any nonwoven interfacing material that is used in garments to retain their shape. However, nonwovens are applied in numerous other fields such as filters in air-conditioning and ventilation systems, battery separators, medical and hygiene products, etc. Six years after the nonwoven operation was successfully running, Freudenberg acquired its first engineered plastic company in the United States.

That company, Disogrin, is located in Manchester, N.H. and is a leader in urethane elastomers. Disogrin's elastomers can be shaped into complex configurations and have unique properties such as exceptional strength, high abrasion, tear resistance, resilience and long-term stability. Major applications are for heavy-duty hydraulic components in seals and packings. The end-product goes primarily into off-road equipment for the farming and construction industries. Another product line used newly developed technology to solve shock absorption problems in smaller front-wheel drive cars for the automotive industry. In this area Disogrin is one of two suppliers worldwide. The urethane compounds are also used for custom-molded parts for a wide variety in scientific, industrial, and consumer applications.

In 1950, Freudenberg founded its first American manufacturing facility in Lowell, Massachusetts...

In the early Seventies, Freudenberg acquired a majority share of International Packings Corp., (IPC), then a publi-

cly-held company. The residual minority shares were acquired in 1984. IPC has a similar history to Freudenberg's, having started many years back producing its first seals from natural leather. Today, rubber and silicone compounds have taken the place of leather. IPC manufactures several thousand different parts and is approaching almost one billion units a year. Their products are used mostly in the automotive industry to assemble brake systems, transmissions, axles, powertrains, engines, etc. IPC's skilled engineering, development and production management provides designed-in quality products. The company operates 12 state-of-the-art manufacturing facilities in the U.S. and Canada.

Today, the Freudenberg group operates five manufacturing companies and three distribution companies in eight states in 20 individual locations.

Escan Corp. joined the Freudenberg U.S. group of companies in 1979. This company is a specialist in vibration control for automotive and truck applications. Escan manufactures a variety of rubber-to-metal torsional vibration dampening devices to protect the crankshaft, timing gear chain, sprocket and other drive components. Additionally, Escan manufactures proprietary "Tuned" dampening systems for engine-to-chassis mounting.

In 1984, Durham, N.C. became the headquarters for The Lutravil Company (TLC). TLC is presently concentrating on the production of non-woven textiles engineered for carpet backings, automotive and building industries. This process is highly sophisticated and capital intensive. It therefore requires a 24-hour day, seven days a week operation. The company's unique technology allows a textile fabric to be made from raw material to finished product in one single, continuous operation.

Vital automotive safety components supplied by Freudenberg.

Policy by Objectives

Today, the Freudenberg group operates five manufacturing companies and three distribution companies in eight states in 20 individual locations. Approximately 3,300 people are employed and revenues in 1986 totaled almost $270 million, of which over 95 percent is manufactured in this country.

Freudenberg's U.S. investment policy had the following three objectives in mind:

- To broaden its international base in order to strengthen the German home operation and to spread the risk.
- To transfer technical know-how and absorb new advanced ideas from a high-tech country by actively participating in a manufacturing process.
- To establish manufacturing capabilities for global sourcing to worldwide customers.

The past 37 years have supplied plenty of evidence that this business philosophy has had good results and probably will continue to do so.

The company did not have any special philosophy on how to go about a new venture in this country other than that it had to fit into Freudenberg's overall business. Half of the current companies were acquired, the rest were start-ups. To set up a new company in the United States is a fairly easy procedure, but to make it a success requires a variety of different skills.

In order to minimize the risks at the beginning, Freudenberg used distribution companies first to test the market acceptance for new products before entering into manufacturing investments. This has proven to be a very prudent and wise method because quite often the products which were intended to be introduced to the U.S. market had to be modified according to different requirements. Such modifications, once accepted (and it must be said that some arm-twisting by German technical experts was often necessary because some ideas were already appreciated by well-known German clients), could be made more easily in the research laboratory in Germany. The manufacturing facility later was built according to American product standards. Since 1980, the company has successfully completed two projects on that basis and is now working on two more.

Fostering Management Advancement

One of Freudenberg's most valuable assets is its people. The local management exercises an open door policy, worker participation through quality circles, rewards through profit-sharing plans, and an intensive exchange of information among the U.S. group and the parent organization in Germany. Some of these tasks were not easy to implement because of the dissimilarity between German

and American management styles, but there were also significant differences among the various members of the U.S. group. The necessary communication was not enforced but developed slowly over the years. There is still room for improvement, but as long as one is aware of this fact, success will follow sooner or later.

Recently, Freudenberg instituted an exchange program for the further growth of its American personnel with management potential. The plan calls for young managers to be transferred to Germany with their families for several years. The Company's objective is to have a group of people on

A strong foothold in the United States will help to secure, not only the employment here, but will also support Freudenberg's German and international business.

both sides of the Atlantic who know each other, respect each other, and therefore are able to master the future of this international group together. It may sound a bit idealistic, but experience has shown that effective communication has always helped to reduce, if not avoid, stereotypes and prejudices.

As far as appointing managers for key positions, the company has only one policy and that is to find the most capable and competent individual for the job without considering passport status. However, it must be mentioned that it has not always been easy to fill open positions with local people. Some of the reasons are logically explainable, some are not. The solution to that problem, as the company perceives it, is to develop its future key in-house executives. However, it should be mentioned that of a total U.S. employment of 3,300, only 12 are so-called transfers from Germany, four of which hold management positions.

Let us now turn to Freudenberg's second important rule for doing business in the United States and that is the soundness of the financial structure of its companies. All holdings are from a financial point of view stand-alone entities with no parent guaranties and equity levels of about 50% or more. This seems an exception for German subsidiaries in this country. This sound foundation has earned the group an excellent reputation from customers, vendors and the business community. Additionally, in the case of new opportunities, Freudenberg has always found ways and means to participate.

What are Freudenberg's expectations for the future? From a more general point of view, the aim is to solidify and expand the current U.S. base, despite a market with its present ups and downs. A strong foothold in the United States will help to secure, not only the employment here, but will also support Freudenberg's German and international business. Employees and customers alike will benefit.

As a strategic concept, the group follows the idea that U.S. investments will help to broaden Freudenberg's global sourcing capabilities. This refers not only to goods which are shipped to the Far East to be used in products for German, European and U.S. customers, but also the raw materials which are purchased today in the United States for German production.

Freudenberg considers its potential markets from a global point of view. The commitment Freudenberg has is to serve its international clients in the best possible way. Wherever products and technical services are required from this group, the policy is that they will be provided regardless of the boundaries—natural, currency and otherwise.

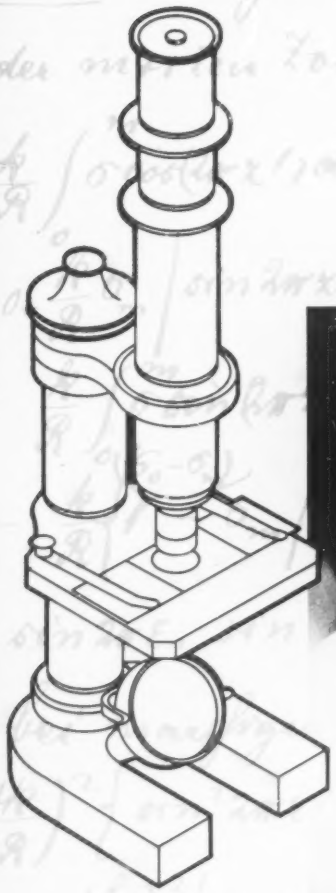
With regard to the United States, both transactions described above will contribute to reducing the U.S. trade deficit; although, it must be confessed, there are a lot of similar actions necessary by other companies as well to make a long-lasting impact. But what probably is equally important to note is the fact that trading is no longer a unilateral or bilateral transfer of goods and services, but a function of globalization. Let us hope that this fact will be accepted politically worldwide in time to avoid any kind of protectionism. ■

ZUSAMMENFASSUNG

Eine konservative und langfristige U.S.-Investition

Pellon Corp., Disogrin Industries Corp., International Packing Corp., Escan Corp., The Lutravil Co., Simrit Corp., Nora Flooring Systems Inc.,—alle diese Namen hoeren sich nicht sehr deutsch an und doch gehoeren alle zur Freudenberg Gruppe in den USA. 1950 gruendete Freudenberg die erste Produktionseinrichtung in Lowell, Massachusetts unter dem Namen "Pellon". Dies war zweifellos eine der ersten deutschen Gesellschaften nach dem zweiten Weltkrieg. Heute besitzt die Freudenberg Gruppe ueber 5 Produktionsgesellschaften und 3 Handelsgesellschaften in 8 Staaten mit insgesamt 20 Niederlassungen. Annaehernd 3.300 Menschen sind beschaeftigt und die Gewinne belaufen sich fuer 1986 auf $270 Mio., wovon ueber 95% in diesem Lande erwirtschaftet wurden.

Die Gesellschaft hatte keine besondere Philosophie hinsichtlich der Betaetigung in den Vereinigten Staaten, bis darauf, dass diese zu den allgemeinen Freudenberg Aktivitaeten passen musste. Die Haelfte der jetzigen Firmen wurde gekauft, die sonstigen waren Neugruendungen. Die U.S.-Investitionen werden der Freudenberg Gruppe helfen ihre weltweiten Ausdehnungsmoeglichkeiten zu verbessern. Diese beruhen nicht nur auf Waren, die in den fernen Osten verschifft werden um fuer Produkte verwendet zu werden, die fuer deutsche, europaeische und amerikanische Kunden bestimmt sind, sondern auch in Rohmaterial, das in den USA fuer deutsche Produktion gekauft wird. Freudenberg sieht seine potentiellen Maerkte weltweit. Die Verpflichtung die Freudenberg hat, ist seinen internationalen Kunden bestmoeglich zu helfen. Die Politik des Hauses ist es, Produkte oder technische Dienste, wo immer sie benoetigt werden umgehend zu besorgen ohne Beruecksichtigung der Hindernisse—natuerlicher, waehrungsbedingter oder sonstiger Art. ❑



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Die Entwicklung einer Aquisitionspolitik fuer die USA

The Development of a U.S. Acquisition Policy

Dr. Hans W. Decker
President
Siemens Capital Corporation

Along with companies from other countries, German firms have recently increased their investment in the United States. While U.S. investments abroad exceeded those of foreign countries in the United States six or seven years ago, this position has today been reversed. Much of the money flowing into the country ends up in financial assets, i.e., stocks, bonds, and Treasury securities, or in real estate. However, a considerable portion is spent on acquisitions or is invested in partnerships with American firms.

Siemens, one of the largest companies in the worldwide electrical and electronics industry, is no exception to this trend. From a barely noticeable presence in the United States about 15 years ago, our company has increased its U.S. business today to an impressive level, with revenues in its most recent fiscal year of more than $2.5 billion. This accounted for more than 10 percent of Siemens' total worldwide business. A large portion of this sales volume is derived from products designed by American engineers and manufactured by American employees in nearly 50 assembly and production sites located throughout the United States.

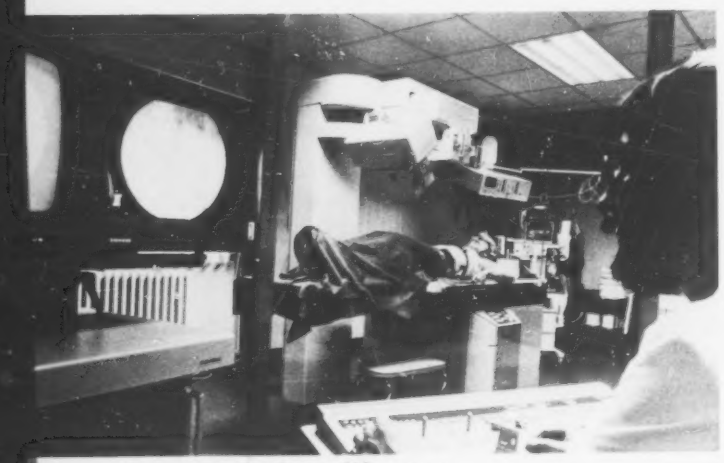
It would have been difficult to achieve this rapid increase in business volume through internal growth alone. The accelerated pace of Siemens' growth in the United States was achieved, to a significant degree, through a cautiously selective process of buying existing U.S. operations or by entering into joint venture agreements with established American manufacturers whose particular strengths complemented those of Siemens.

Growth achieved through acquisitions and joint ventures is not an entirely new experience for Siemens. The company, which was founded in 1847 as a telegraph apparatus manufacturer, concluded its first important merger agreement as early as 1903 by combining its power engineering operations with another German company to create *Siemens Schuckertwerke GmbH*. In 1925 another joint venture of major consequence, this time in medical technology, saw *Siemens-Reiniger-Werke AG* established. It was this Siemens subsidiary, today its Medical Systems Group, which pioneered Siemens' activity in the United States, through its entry into the X-ray diagnostic equipment market here in the early 1950s.

The Motivating Force behind Siemens' Acquisitions

The company's relationship with the United States started in 1874 when Siemens laid the first transatlantic cables between Europe and the United States. However, direct business opportunities were not pursued until much later. After 1945, Siemens, like many other German companies, concentrated on rebuilding its business in Europe, and later expanded into Latin America and Asia. Thus, it was not until the 1950s that Siemens entered the United States.

As a relative latecomer to the U.S. market, Siemens' objective in this country had to be rapid market growth for



New apparatus that destroys kidney stones.

its technology. The purchase of American companies with established distribution channels could speed up the process. Already a technological leader in its field, the company has not been as interested in acquiring technology as it has in establishing marketing channels. Siemens needed to catch up to its competitors in this country.

With the rapid development of new technologies, particularly microelectronics, Siemens, by the early 1970s, realized its traditional export business of conventional technologies and capital goods infrastructure projects in the Third World was likely to stagnate. The company successfully integrated the new technologies into its traditional businesses like factory equipment, power plants, and mechanical telephone exchanges, and shifted its focus to microelectronic products, namely factory automation, telecommunications, office technology (including computers), microelectronic components, and electronic medical technology. For these product areas, double-digit growth rates are expected in the coming years.

Expenditures for research and development, as well as for plant and equipment in these new technologies are so massive that companies who wish to remain in the league of world players must attain considerable size. This is

The company's relationship with the United States started in 1874 when Siemens laid the first transatlantic cables between Europe and the United States.

offered today only via a presence in the American market, which is seven to eight times larger than the market of the Federal Republic. Opportunities for recouping the development costs are therefore much greater in the United States.

So, expanding in the U.S., which is the largest and fastest growing microtechnology and telecommunications market, was a necessary and logical step for a company like Siemens, which has the technology but needed the access to the market. Acquiring well-managed U.S. companies, their infrastructure and people, offered the optimal means for providing market channels when no viable alternatives were available. Through the purchase of existing companies, Siemens has been able to find a ready customer base for the technologies it has targeted as major growth areas.

A good example, how Siemens has been able to improve its position in the U.S. market through acquisitions, is the recent purchase of Telplus-Communications, the largest U.S. independent distributor of private communications products with some 2,700 employees. The acquisition gives Siemens an advantage in upgrading its base for private office communication systems in the U.S. As one of the world leaders in voice and data communications, and with a firm grasp of ISDN, Siemens has now the capability to supply its technology to the American office automation equipment market.

In the American telecommunication sector, Siemens' U.S. partnership with GTE in the transmission business has strengthened our concern's position in this important field. The acceptance of Siemens as a vendor to the regional Bell telephone companies, each of which is as big as the Deutsche Bundespost, has set the signal for Siemens' switching business throughout the world. Although technologically competitive with its North American counterparts, access to such an immense market was only achieved after obtaining the right infrastructure in the local

Acquisition tactics that have become prevalent in the U.S. in recent years, in particular so-called hostile take-over practices, have never been and will never be an element in the company's strategic plans.

market place. What was needed was not only a distribution and service network but also a strong engineering and manufacturing presence. No customer entering into a long-term business relationship for the major equipment on which his business relies would want to become dependent on a supplier of foreign products.

It is often perceived that German companies have been enticed by the low dollar value to buy their way into American businesses. Although lower deutsche mark expenditures used for investments may be welcomed as a windfall (of course, a corresponding reduction of returns is the other side of the coin), there is no doubt that long-term strategic concepts are not likely to be influenced by currency fluctuations. The lower dollar, however, may be an incentive for other types of investments of surplus company cash. Decisions to diversify into U.S. real estate investments are no doubt influenced by exchange rate considerations.

Siemens' prime objective is to remain one of the pacesetting innovators in electronics and electrical engineering, and to maintain a high growth rate. Acquisition tactics that have become prevalent in the U.S. in recent years, in particular so-called hostile take-over practices, have never been and will never be an element in the company's strategic plans. Acquisitions as an alternative to internal growth have only been considered if an understanding is reached with the owners and management of a potential acquisition candidate which satisfies all parties' needs.

Conditions for a Successful Acquisition

In strengthening its U.S. market position through acquisitions and joint ventures, Siemens first went through a learning process. In the early stages, during the 1970s, not all of the projects led to the promised straight route into this market. Like many foreign purchasers of American companies, the Siemens managers had to learn important lessons about doing business in the United States before their expansion through acquisition strategy could successfully be applied.

A major factor was the ability of local management and the Group's German management to assign to the new subsidiaries well-defined positions within their overall strategic concept.

Fortunately, Siemens' groups and divisions proceeded very cautiously in the beginning, staying away from large acquisitions. Occasionally, the company was criticized for its conservative approach. However, the initial grab bag of mostly small American companies offered Siemens an ideal opportunity to get its feet wet without taking undue risks. Some early failures laid the groundwork for the subsequent series of successful acquisitions and joint ventures. They have helped the company reach its present U.S. business volume and give it the assurance that the company is on the right track in achieving its strategic goals in this country.

A common mistake made in the early phase of acquisitions was the failure of the acquiring division to make the American subsidiary an integral part of its global strategy, coupled with lack of sufficient support. Without support from the parent company, the momentum of a formerly well-run operation was quickly dissipated. Synergies between the German groups and the new subsidiaries that looked so enticing in business plans could not be realized because at that time it was often not fully understood how to convey resources from Germany to this country, e.g., Siemens' technology, manufacturing expertise, or administrative skills. This was particularly true in smaller companies: aside from occasional visits by German managers, a heavy load of new reporting tasks, which had little relevance to the subsidiary's business, was frequently the only area of intercompany contact.

Not surprisingly, this problem did not occur in the acquisitions made on behalf of Siemens' Medical Systems Group. That group had the advantage of having marketed their products in the U.S. much earlier than did their colleagues from other product divisions, and already had an American management team in place. The integration of newly acquired companies, while not always easy, succeeded in each and every instance. A major factor was the ability of local management and the Group's German management to assign to the new subsidiaries well-defined positions within their overall strategic concept. In addition, the Group's entire resources were made available to the new subsidiaries, rather than merely satisfying their appetite for working capital.

Whenever a dissimilarity of expertise—either in markets or technology—occurred, the company was likely to experience difficulties. This happened when investments were made, either because a division wished to control a vendor on whose products it depended, or because the American company's products were not in the German division's present spectrum and were seen as a vehicle for diversifying into promising new business areas.

By contrast, when Siemens—after cooperating with Allis-Chalmers on a contractual basis for a number of years—formed a joint venture with this company for power generation and other electrical equipment, this investment (today the fully-owned U.S. unit of Siemens's Energy and Automation Group) turned out to be a good match from a marketing point of view. The German division in Erlangen was familiar with the particular technology and markets, and had, in execution of existing license and technical exchange agreements, established a good working rapport with the managers of that American company.

In the joint venture area, Siemens and Corning Glass Works, whose respective business cultures have much in common, combined their resources in fibers and telecommunications to form Siecor which soon became the leading manufacturer of fiber optical cables. Neither of the two companies could have achieved this alone; combining their complementary technologies made the success possible.

Business practices in this country can be enormously misleading to foreigners.

Unless the management of the acquiring company feels comfortable with the products, customers, and the business climate in which the potential subsidiary operates, one is better advised to refrain from a purchase. The acquisition of Silicon Valley venture firms by companies like

Assembly and test of the 1-Mbit DRAM at Siemens plant in Regensburg.

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Fiscal year 1986	Preliminary Figures as of December 31, 1986
Total Assets	DM 59.9 billion
Customers' Deposits	DM 28.4 billion
Loans to Customers	DM 32.0 billion
Capital and Reserves	DM 2.1 billion

Consolidated Balance Sheet Figures.

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IBM, Philips, and Siemens obviously poses additional unquantifiable risks.

On the other hand, when Siemens purchased Potter & Brumfield, the country's leading manufacturer of relays for computer, automotive and industrial controls, with headquarters in Indiana, the management in Munich was successfully able to integrate the U.S. business into their worldwide strategies, as they were, so to speak, on home turf.

It is frequently held that the acquiring company should provide the new subsidiary's top management. Attempts to keep former management are generally considered doomed, either because former owner/managers are now too financially comfortable to continue as corporate managers, or simply because they are unwilling to report to a new layer of corporate management.

While this may be true to a degree, Siemens' experience with in-place management has been a positive one. Initially, when the company's U.S. presence was small, most

More frequently, the company has been able to retain the services of former top management, who successfully made the transition and who welcomed the opportunity to work within a new corporate structure.

of the firm's Groups lacked a local management cadre to staff newly acquired subsidiaries. In some cases, German personnel were transferred to the United States to fill vacant positions, often with surprisingly good results. More frequently, the company has been able to retain the services of former top management, who successfully made the transition and who welcomed the opportunity to work within a new corporate structure. These people's contributions to the integration process were invaluable. It has been the Siemens' experience that the right mix of willingness to learn from American colleagues—coupled with a clarity of objectives—leads to a cooperative environment in which these managers will turn out to be enormously fruitful. They have often become the catalysts for a merger's success.

Siemens' "think factory" in Bavaria is a bastion of top technology.

The Biggest Hurdle

The greatest difficulty that a successful and large German company like Siemens will encounter in expanding its operations through U..S. acquisitions can be found in the

The friendliness and relaxed atmosphere in which even big dollar transactions are conducted frequently lull the German businessman into a false sense of believing he knows the American way of doing business.

differing business or corporate cultures prevailing in the two countries, or in what may best be summarized in one word—*mindset.* Business practices in this country can be enormously misleading to foreigners. German businessmen who have successfully transacted agreements the world over, and who know the language, are probably more susceptible to the danger of falling into traps than business people with radically different backgrounds, e.g., those from Asian countries. The friendliness and relaxed atmosphere in which even big dollar transactions are conducted frequently lull the German businessman into a false sense of believing he knows the American way of doing business.

Business standards and practices in America vary widely from those in Germany. What is business logic in Germany is not necessarily the same in the United States. In order to achieve a *transatlantic* management style, a prerequisite for integrating the acquired U.S. companies into the compa-ny's global strategy, an important process must be put in place: not only should managers of the U.S. operations try to understand and learn from the way their European counterparts conduct their business affairs, European managers must also adapt their ways, beliefs, and methods to those of the United States.

This process has already succeeded within Siemens. The exposure to the U.S. market that a large number of company managers have experienced over the past decade has greatly influenced Siemens' ways of doing business worldwide, and valuable—if not quantifiable—input has been received through dealing with newly acquired U.S. subsidiaries.

To avoid mistakes when entering into negotiations, and to be on a par with its American business partners, one has to cultivate and extensively consult with American advisors who comprise both outside counsel and inhouse experts in legal, tax and accounting practices as well as in business development and strategic planning. Consequently, the upfront cost of acquisition projects is enormous. However, to rely on one's own business expertise gained outside this country would be disastrous.

Siemens today leans on American managers to run the day-to-day affairs of its U.S. investments. Heads of the operating companies that represent the businesses of Siemens Groups are either Americans or American-trained

A Siemens plant in New Jersey, one of many in the United States.

managers. The same is true for marketing, sales and distribution, and manufacturing personnel. By contrast, higher ranking financial officers are usually German to assure that reporting and planning by U.S. operations follows Siemens complex internal accounting and reporting system.

Finally, a German company acquiring U.S. firms needs people who can function on two levels, who know both countries and both mentalities. These employees, often of German descent, play a pivotal role in assisting their German colleagues to tune into the American mentality. In turn, they assist as translators for their American colleagues in their working relations with German headquarters.

In summary, the strategy of obtaining access to the U.S. market by acquiring American companies can be successful if the parent company brings a few things to the party. Siemens has contributed much more than just deutsche marks. Aside from demonstrating a willingness to invest in America, its opportunities, its workers, Siemens has brought to the American marketplace its storehouse of across-the-board expertise. It has backed up its philosophy of producing quality products, quality technology, and quality people by adopting a philosophy of an American company, building its factories and providing employment for more than 25,000 in over 350 locations here in the United States. ■

ZUSAMMENFASSUNG

Die Entwicklung einer Aquisitionspolitik fuer die USA

Ebenso wie Unternehmen aus anderen Laendern haben deutsche Firmen ihre Investitionen in den Vereinigten Staaten unlaengst gesteigert. Waehrend vor sechs bis sieben Jahren US-Investitionen im Ausland solche auslaendischer Unternehmen in den USA ueberstiegen, haben sich die Positionen heute umgekehrt.

Siemens, eines der weltgroessten Unternehmen in der Elektro- und Elektronikindustrie, ist keine Ausnahme von diesem Trend. Von einer kaum spuerbaren Anwesenheit in den Vereinigten Staaten vor ungefaehr 15 Jahren hat die Gesellschaft ihr Geschaeft auf ein beeindruckendes Niveau gesteigert. Sie erzielte im zurueckliegenden Finanzjahr Einnahmen von mehr als $2.6 Milliarden. Das macht mehr als 10% des gesamten weltweiten Siemens-Geschaeftes aus.

Die beschleunigte Wachstumsgeschwindigkeit von Siemens in den USA wurde zu einem beachtlichen Teil erreicht durch vorsichtiges und selektives Vorgehen beim Kauf existierender US-Geschaefte oder den Einstieg in Joint-Ventures mit bestehenden amerikanischen Herstellern, deren besondere Staerke die von Siemens ergaenzte.

Als relativer Spaetstarter in den US-Markt musste Siemens das Ziel raschen Marktwachstums fuer seine Technologie verfolgen. Der Kauf amerikanischer Unternehmen mit bestehenden Vertriebskanaelen konnte diesen Prozess beschleunigen. Da sie selber bereits ein technologischer Fuehrer war, bestand weniger Interesse am Zukauf von Technologie als am Aufbau der Marketing-Organisation. Siemens musste insoweit zu seinen Wettbewerbern in diesem Land aufschliessen.

Gluecklicherweise sind die Siemens-Einkaeufer anfangs sehr vorsichtig vorgegangen und haben grosse Aufkaeufe unterlassen.

Ein allgemeiner Fehler, der in der ersten Phase der Aufkaeufe gemacht wurde, war das Versagen der Aquisitionseinheit bei der Integration der Tochtergesellschaften in die globale Strategie verbunden mit dem Mangel an ausreichender Unterstuetzung.

Die groesste Schwierigkeit, die ein erfolgreiches und grosses Unternehmen bei der Expansion der Geschaefte durch US-Firmenkaeufe erwartet, kann in den unterschiedlichen Geschaefts- und Unternehmenskulturen, die in den beiden Laendern vorherrschen, gesehen werden.

Geschaeftsgrundlagen und Praktiken in Amerika weichen stark von denen in Deutschland ab. Was im Geschaeftsleben in Deutschland logisch ist, muss in Amerika nicht notwendig genauso sein. Um einen "transatlantischen" Fuehrungsstil zu erreichen—eine Vorbedingung fuer die Integration der aufgekauften US-Unternehmen in die weltweite Firmenstrategie—muss ein wichtiger Prozess in Gang gesetzt werden: nicht nur die Manager der US-Unternehmen sollten versuchen, die Handlungsweisen ihrer europaeischen Gegenspieler in der Geschaeftsabwicklung zu verstehen und daraus zu lernen. Ebenso muessen die europaeischen Manager ihr Verhalten, Gedanken und Methoden an solche aus den USA anpassen.

Zusammengefasst, kann die Strategie, Zugang zum US-Markt durch Firmenkaeufe zu erlangen, erfolgreich sein, wenn die Muttergesellschaft einige Voraussetzungen mitbringt. Siemens hat weit mehr als nur Deutsche Mark beigesteuert. Neben der Demonstration seiner Bereitschaft zu Investitionen in Amerika hat Siemens auf den amerikanischen Marktplatz sein Warenhaus an grenzueberschreitender Qualifikation mitgebracht. Es hat seine Philosophie der Herstellung von Qualitaetsprodukten, Qualitaetstechnologie mitgebracht.

Dazu hat Siemens durch Anpassung an US-Unternehmens-Philosophien gute Mitarbeiter bekommen und bietet in seinen Fabriken fuer mehr als 25,000 Mitarbeiter in ueber 350 Orten in den Vereinigten Staaten eine Anstellung. ❑

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Die Weltumschliessung der Kapitalmaerkte

The Globalization of Capital Markets

Karl Schmidt
Vice President
The Chase Manhattan Bank

Chase Manhattan's New York headquarters.

Today, when we speak of the financial marketplace, we are referring to a global marketplace.

This article started out to be about a German company that wanted to establish a presence in the United States.

I soon realized, though, that in 1987 such an article was too parochial, too tightly focused. The same set of circumstances would apply to a company from Sweden or Italy or Taiwan. And the locus might just as well be the United Kingdom, Singapore or Brazil.

In each case, companies would face the single most important factor in corporate finance today: the internationalization of capital markets.

A German company, therefore, that wished to locate facilities in the United States would probably deal with a U.S. bank like Chase. But it might end up tapping financial sources in Hong Kong or Tokyo as readily as those in New York Chicago or Los Angeles.

Global Networks Reach across Borders

Today banks like Chase, with truly global networks, reach across political borders to meet corporate capital needs. Here are a few examples:

- When a company in Madrid put its cosmetics subsidiary up for sale, Chase prepared a list of 32 companies

from around the world that might have an interest in the Spanish personal care market. A U.S.-based firm turned out to be the taker.
- When a British printing company chose to internationalize, Chase successfully targeted acquisition candidates in the United States.
- When a New Zealand firm chose to raise equity capital in the United Kingdom, the securities subsidiary of Chase, an American corporation, did the underwriting.

No longer is it accurate to say: "The world is getting smaller" or "The world is growing more interdependent." Today, the world *is* small! It *is* interdependent! A decade ago, capital markets were, by and large, national markets.

International trade in goods and services now amounts to $2.5 to $3.0 trillion a year.

Today, when we speak of the financial marketplace, we are referring to a global marketplace.

In this new environment it is not enough for a bank to be located in London, Tokyo and New York. To be truly global, a bank must be established in a score of key countries around the world.

There is a great difference between the commercial banking networks of a few years ago and today's investment banking networks. In the old days international banking networks consisted of self-contained units. There was no need to be in constant contact with them, nor were they with each other. Indeed, it was impossible to be in close contact. The requisite technology did not exist.

Today's investment banking world is one of constant interaction and intermediation on national and multinational bases. Technology is the driving force that has created this truly worldwide financial market.

The Technology Genesis

In the United States, technology is helping create a national banking system, regardless of anachronistic laws and regulations. Perhaps the best example of this is the credit card. No credit card holder cares that the processing of his or her transactions is carried on in Delaware or South Dakota. What counts is that it can be used anywhere. Convenience, made possible by technology, has created a national marketplace.

Foreign exchange traders in Chase's New York headquarters.

The expansive influence of technology is equally true internationally. It has made possible cross-border capital flows of a magnitude unthought of a few short years ago. Evidence of this shift from national markets to an infinitely more complex global market is all around us.
- International trade in goods and services now amounts to $2.5 to $3.0 trillion a year. This is dwarfed by the London Eurocurrency market, which turns over some $300 billion a day, or $75 trillion a year—a volume 25 times that of world trade.
- Worldwide foreign exchange transactions run about $35 trillion a year, mostly executed by financial institutions. This total is 10 times that of world trade.
- The annual volume in interest rate and currency swaps, for which a market barely existed a few years ago, is now in the hundreds-of-billions-of-dollars range.

Corporate treasurers today are shopping the world's financial markets for cheaper capital and restructuring their debt on the international securities markets. And not just a handful of giant companies are doing it. Medium-sized firms are doing it, too.

When a U.S.-based cosmetics company, for instance, wanted to raise $70 million, a number of institutions offered proposals. These included the use of Japanese yen and a number of other currencies. The proposal on which the treasurer finally settled was a debt issue denominated in European Currency Units (ECUs) plus a currency swap to convert it into dollars. He could confidently report to his top management that the had polled the entire world and raised the money as cheaply as possible.

In a similar financing, the U.S. subsidiary of a German automotive company borrowed long-term Swiss francs which were then swapped into U.S. dollars for U.S. capital expenditures.

A truly global bank with the proper mix of origination and distribution capabilities can easily and quickly service this kind of transaction—a transaction no one had heard of—perhaps even imagined—10 years ago. Interest rate and foreign exchange risks that once were daunting obstacles to many international financings are today facilitated by swaps, caps, collars and other advanced hedging techniques.

Artificial Distinctions Fade

With technology driving the global marketplace, the process of financial deregulation is quickening. Artificial distinctions between various types of financial institutions are fading. A convergence within the industry is taking place.

It is clear that the world's top financial institutions will not be divided into four, once distinct groups: investment banks, securities companies, commercial banks, and financial conglomerates. Rather, they will be categorized by the

size of their international networks, their communication networks, the quality of their people, and the size of their capital bases.

The world of corporate finance has never been more exciting. There are more options, more products to choose from and lower intermediation costs because of technology and increased competition.

For a company seeking financing, it's a new—and exciting—ball game. Whether the company be German or of any other nationality, the marketplace is global. The opportunities are limited only by technology and the imagination of the participants. ■

ZUSAMMENFASSUNG

Die Weltumschliessung der Kapitalmaerkte

Dieser Artikel sollte eigentlich von einem deutschen Unternehmen handeln, das versucht, seine Praesenz in den Vereinigten Staaten aufzubauen. Ich habe bald bemerkt, dass ein solcher Artikel im Jahr 1987 zu eingeschraenkt und zu eng eingegrenzt ist. Die gleichen Umstaende wuerden Unternehmen aus Schweden, Italien oder Taiwan treffen. Und der Ort der Handlung koennte genausogut Grossbritannien, Singapur oder Brasilien sein. In jedem Falle wuerden die Unternehmen dem wichtigsten Faktor der heutigen Unternehmensfinanzen begegnen: der Internationalisierung der Kapitalmaerkte.

Fuer ein deutsches Unternehmen, das Einrichtungen in den Vereinigten Staaten plant, koennte es beispielsweise guenstig sein, mit einer US-Bank—wie der Chase—zusammenzuarbeiten. Aber vielleicht zapft es schliesslich Finanzquellen in Hongkong oder Tokio genauso gern an wie solche aus New York, Chicago oder Los Angeles.

Heute greifen Banken wie die Chase mit wirklich weltweitem Netzwerk ueber die politischen Grenzen hinweg, um die Kapitalbeduerfnisse der Unternehmen zu befriedigen. Es gibt einen grossen Unterschied zwischen dem frueheren "commerical banking" und der heutigen "investment banking"-Organisation. In den "alten Zeiten" bestanden die "investment banking"- Organisationen aus selbstaendigen Einheiten. Das heutige "investment banking" ist eine Welt mit eigener staendiger geistiger Zusammenarbeit und Interaktion auf nationaler und multinationaler Ebene.

Die Treasurer der Unternehmen durchstreifen die Finanzmaerkte der Welt auf der Suche nach preiswerterem Kapital und strukturieren ihre Verbindlichkeiten auf den internationalen Wertpapiermaerkten um. Fuer eine Gesellschaft, die eine Finanzierung sucht, ist dies ein neuer und aufregender Sport. Egal, ob die Gesellschaft deutsch ist oder eine andere Nationalitaet hat, der Markt ist weltweit. Die Moeglichkeiten sind nur von der Technik und von der Vorstellungskraft der Marktteilnehmer begrenzt. ❑

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Das Uebernahmefeuer—Ein Schub westwaerts

Acquisition Fervor: the Push Westward

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West Germany and the United States. Two large, stable, homogeneous markets, each attracting sales and investment by companies based in its opposite number. Yet while the route to corporate expansion via international mergers and acquisitions is a two-way street between the two countries, increasingly it is one where traffic is much heavier in one direction than the other. Why the imbalance, corporate executives ask? And given that imbalance, does it really matter? Finally, how does a company planning to expand in this way overcome the structural barriers of an unfamiliar setting and assure success in acquisitions?

Over the last two years, acquisition activity among German and American companies picked up in a westward direction. In 1985, 35 German companies made U.S. acquisitions. That figure grew by almost 30% to 45 acquisitions in 1986. U.S. corporate acquisition in Germany slowed during that same period, from 54 in 1985 to 42 the following year. Statistics for early 1987 indicate this trend has continued with the results for all of 1987 likely to closely approximate last year's.

Not only have German companies increased their transatlantic activity in terms of transactions, the size of these deals has grown larger. During 1985, four of the largest acquisitions by German companies had a total value of $1.24 billion. Last year, seven of the largest U.S. acquisitions by German buyers totalled $4.3 billion—more than triple the 1985 value for less than double the number of transactions.

Playing Catch-up

To a large extent, German companies' current tilt toward the United States is overdue. American corporations made their big push abroad in the post-war years, especially throughout the 1960s, establishing a strong presence in European markets through direct investment in their own startup operations. Major U.S. automotive companies and many consumer goods producers established a presence in their own names years ago; recent acquisitions are more geared to filling market niches than to basic expansion.

Many German companies, in contrast, were for decades caught up in the task of rebuilding their businesses at

Not only have German companies increased their transatlantic activity in terms of numbers of transactions; the size of these deals has grown steadily larger.

home and in neighboring European markets during the post-war period. While they effectively served foreign markets such as the United States for years through exports, their commitment to expansion through acquisition is a relatively new phenomenon. It is this cyclical turn in international flows of direct capital investment that underpins the current acquisition surge.

The appeal of the U.S. market and the relative ease with which acquisition candidates are identified and wooed constitute the second group of factors accounting for the surge of German acquisitions in the United States. The stock markets are large and diverse, making it possible for companies to easily identify candidates and set basic prices for publicly-traded companies—except in time of extreme turmoil as seen lately—either buying in with a limited stake at the outset or making tender offers for control.

True, U.S. authorities, in particular the courts and state legislatures, have recently been inclined to favor measures that preserve corporate independence in the face of takeover threats. But the specific provisions being upheld—such as *poison pills* that make acquisitions either too expensive or simply unmanageable for new owners—are usually invoked only in the case of a hostile takeover bid, a tactic that acquisition-minded German companies generally distain.

Availability of Candidates

Indeed, American companies often welcome talks with potential acquirers, whether home-bred or foreign in origin. Older publicly held companies may find themselves lacking the resources required to compete effectively in today's world markets. The wave of corporate restructuring in some cases goes beyond the usual divestment of unproductive operations and adjustments to a company's financial structure. Some companies are effectively *restructured* only once they are in the hands of a new owner—and that may turn out to be a new German parent firm.

Newer, privately held companies also comprise an attractive group of potential acquisition candidates in the United States. Typically, startup companies reach a certain point at which they must raise new capital by either going public or being acquired by an entity with vast resources. Clearly, the latter of these alternatives is today in many cases preferable, given the recent dramatic drop in share prices, with the resulting effective closure of the new share *window*.

Although private companies by definition are not required to make public data on their financial condition and the nature of their operations, in fact many private companies in the United States do publish such information in a form very similar to that required of publicly held corporations. Too, a variety of third party sources such as

Some companies are effectively "restructured" only once they are in the hands of a new owner—and that may turn out to be a new German parent firm.

industry analysts and trade publications regularly scrutinize the activities of the up-and-comers. In general, it's not all that difficult for experienced analysts to gather information on private companies' finances and operations, particularly in the case of enterprises that anticipate eventual overtures from potential acquirors.

Entry into U.S.investment is also made easier by the fact of an organized labor movement that is relatively innocuous by European standards. American workers, especially those in the sunset industries such a steel and textiles, have been lobbying for greater job protection and a say in corporate takeovers that result in closing down operations, but their challenges have not been too effective and are not in any case aimed particularly at foreign purchasers.

The third factor smoothing the way for German acquirors in the United States is the array of highly skilled acqui-

U.S. companies committed to new growth in Germany through acquisitions are likely to meet with some befuddlement, however, for the ease of such transactions is more apparent than real.

sition and merger specialists in both investment and commercial banks as well as the consulting field. A potential buyer who has, so to speak, just stepped off the boat can enlist qualified professionals experienced in all aspects of acquisition transactions, from identifying candidates and forecasting long-term performance prospects to bargaining over price and terms, down to the final signature on the dotted line.

Subtle Barriers in Germany

To American companies that have penetrated the German market through internal growth, the acquisition climate in Germany is probably less of an immediate issue. U.S. companies committed to new growth in Germany through acquisition are likely to meet some befuddlement, however, for the ease of such transactions is more apparent than real.

On the regulatory front, barriers to entry seem less formidable than in the United States. The opportunities to install anti-takeover measures such as *poison pills* and *golden parachutes* for ousted executives are very restricted. Moreover, acquirors of equity holdings need to report their holdings only once they have reached the level of 25 percent, as opposed to 5 percent in the United States.

It is the pattern of corporate holdings in Germany rather, along with its particular management structures, that tend to dampen enthusiasm in the acquisition effort. There are fewer than 500 companies listed on the German stock exchange, compared with some 5,000 in the United States. An the larger part of this group are fairly well entrenched in terms of both ownership and management, not particularly receptive to overtures by potential acquirers. Large German banks hold significant shareholdings for their own accounts and also vote the shares of small individual stockholders they represent. Consequently, a proxy solicitation of shareholders in general won't find much of an audience.

Nor is effective corporate control necessarily assured even where an acquiror takes a majority shareholding. Employee representatives make up one-third to one-half of corporate supervisory boards, which in turn appoint the management boards that run companies on a day-to-day basis. As management's partners, these representatives tend to be fairly conservative, generally supporting the existing team of executives. It's hard to imagine an acquisi-

tion in Germany accompanied by the kind of corporate-takeover drama that has become familiar in the United States, where a successful raider sweeps out an entire management team literally overnight.

Despite the large number of privately held companies in Germany, this group as a whole is no more approachable than its publicly held counterpart. Many of these are older, stable companies whose capital requirements have been quite satisfactorily met through internal funding and banking relationships. There's seldom compelling reason for them to go up for sale, so they don't.

Pricing, Stock Performance and Exchange Rates

The task of pricing international acquisitions has recently been confounded by the plunge of the dollar against the deutschemark and the dramatic down-and-partly-up-again performance of the U.S. stock market. The effect of each of these factors on the other makes the situation even more confusing.

As a matter of management policy, where a company has determined that acquisitions abroad are essential or at least an important element of a global strategy of expansion, the effect of exchange rates on the sale price should rate no higher than midway on the acquiror's list of concerns.

An American company just moving into the German market, for example, should not call off its acquisition search simply because the dollar drops a few cents against the mark. Once an acquisition proposal has been shepherded most of the way towards execution of the final transaction, however, it may be possible to time the actual payment to a favorable rate within a limited range.

Similarly, German companies shouldn't be expected to become any more aggressive than they already are on the U.S. front, despite apparent bargains on the stock market and indications that the dollar will creep still lower. True, some tender offers for American companies by purchasers both in the U.S. and abroad—none in Germany—have been put on hold because the offers based on early-October market prices seemed wildly extravagant after October 19. Instead, potential purchases could start toward

Despite the large number of privately held companies in Germany, this group as a whole is no more approachable than its publicly held counterpart.

their acquisition goals by scooping up shares in the open market at what might be rock-bottom prices.

Companies whose acquisition plans were less well developed can now at least be comforted by the fact that price-earnings ratios for the Standard & Poor's 500 index have dropped from an inflated 22 to 16, just about where they were a year ago. But acquirors shouldn't be overly influenced by stock prices on the open market as an isolated factor. What's the point of a bargain-basement acquisition if the acquired company's profits are remitted in a currency whose value is steadily declining?

Acquisition Strategy

What does it take to quell the fears of potential acquirors, faced with such an uncertain environment for acquisitions? Successful acquirors, while diverse in objectives and specific tactics, do have certain characteristics in common, whether they are German companies entering the U.S. or *vice versa*.

Clarity of strategic goals. Objectives usually go beyond mere growth. Bertelsmann, the large German publisher, has long been interested in expansion in the U.S. The close nature of this industry, along with the linguistic ties any publishing concern has to its home territory, pointed to acquisition. With its $475 million purchase of Doubleday in 1986, Bertelsmann became the world's second-largest publisher and probably got a much stronger footing in the United States than could have been achieved by starting up its own operation. Chicago Pacific's 1986 acquisition of Rowenta, a German producer of small appliances, was based on a quite different strategy: diversification of business into a new product area, at the same time expanding on territory abroad.

What's the point of a bargain-basement acquisition if the acquired company's profits are remitted in a currency whose value is steadily declining?

Effective identification of candidates. American companies tend to follow a more or less continual search, partly as a function of widespread dissemination of information of corporate activities within the country. When U.S. firms start to look abroad, however, and conversely, when German companies consider the U.S. as a market for expansion, they will by definition suffer from not playing in their home market and will in most cases need to enlist professionals who can quietly but systematically identify potential candidates.

Planning for post-acquisition management. An acquiror's success in finding the ideal candidate and negotiating a fair price can be—and often is—completely undone if management has not anticipated the key issue in running its acquisition. Will some operations be combined and product lines streamlined? Will existing management run the acquired company, or do new assignments need to be made throughout the enlarged enterprise? Do completely new opportunities present themselves as a result of the combined resources of the two enterprises?

Corporate executives who provide the answers to these questions before they begin their candidate search stand the greatest chance of making successful acquisitions, regardless of the changes in business climate regulations, and exchange rates on one side of the Atlantic or the other. Those who ignore these issues and fail to undertake adequate planning for post-acquisition management are probably doomed to endlessly chase a mirage of successful internationalization. A costly game, to be sure. ■

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ZUSAMMENFASSUNG

Das Uebernahmefeuer—Ein Schub westwaerts

Deutschland und die Vereingten Staaten zwei, grosse stabile und homogene Maerkte, locken Kaeufe und Investitionen durch Gesellschaften von der jeweils anderen Seite des Atlantiks an. Der Weg zu Expansion durch internationale Firmenkaeufe steht zwar in beiden Richtungen offen, doch wird der Verkehr in der einen Richtung zunehmend groesser als in der anderen.

In den letzten zwei Jahren hat die Kaufaktivitaet unter den deutschen und amerikanischen Unternehmen in westlicher Richtung zugenommen. 1985 haben 35 deutsche Firmen US-Kaeufe getaetigt. Die Zahl wuchs 1986 um 30% auf 45 Kaeufe. Die Zahl der Kaeufe durch US-Firmen sank in diesem Zeitraum von 54 im Jahr 1985 auf 42 im folgenden Jahr. Statistiken fuer 1987 zeigen eine Fortsetzung dieses Trends.

Fuer eine groessere Ausdehnung ist der Vorstoss der deutschen Unternehmen in Richtung USA ueberfaellig gewesen. Viele deutsche Gesellschaften waren in der Nachkriegsperiode fuer Jahrzehnte mit der Aufgabe beschaeftigt ihr Geschaeft zuhause und in den europaeischen Nachbarmaerkten wiederaufzubauen. Die Attraktivitaet des US- Marktes und die Moeglichkeit Uebernahmekandidaten leicht zu erkennen und zu erobern stellen die zweite Gruppe von Faktoren dar, die den Anstieg der deutschen Firmenkaeufe in den USA hervorgerufen haben.

Der dritte Faktor, der den Weg fuer deutsche Firmenkaeufe in den USA ebnet ist das Aufgebot an hochqualifizierten Kauf- und Uebernahmeexperten in den Investment-und Geschaeftsbanken sowie im Consulting Bereich.

Fuer amerikanische Gesellschaften, die den deutschen Markt durch eigenes Wachstum durchdrungen haben ist das Uebernahmeklima in Deutschland weniger ein unmittelbarer Nachteil. US-Gesellschaften aber, die fuer neues Wachstum in Deutschland auf Firmenkaeufe angewiesen sind, stehen vor moeglichen Verwirrungen, denn die Hilfe bei solchen Transaktionen ist eher verschwommen als real.

Wie auch immer, an den deutschen Boersen sind mehr als 500 Unternehmen notiert gegenueber 5.000 in den USA. Ein grosser Teil davon hat sich gut verschanzt sowohl hinsichtlich der Eigentuemer wie auch des Managements, absolut unempfaenglich fuer Werbungsgesaenge von potentiellen Aufkaeufern. Grosse deutsche Banken halten bedeutende eigene Aktienbestaende. Daneben ueben sie noch das Stimmrecht fuer viele kleinere Depotkunden aus. Folglich finden auch die Antraege einzelner Aktionaersvertreter wenig Gehoer.

Als Gegenstand der Managementpolitik sollte der Einfluss der Wechselkurse auf den Verkaufspreis nicht oben auf der Liste der Kaeuferbedenken stehen, wenn ein Unternehmen davon ueberzeugt ist, dass ein transatlantischer Firmenkauf unerlaessliches oder jedenfalls wesentliches Element einer globalen Expansionsstrategie ist.

Frueher hat bereits das Kaufangebot den Weg bis zur entgueltigen Ausfuehrung bestimmt. Es sollte jedoch moeglich sein die tatsaechliche Zahlung auf einen guenstigen Zeitpunkt zu legen—innerhalb eines angemessenen Spielraumes. Dementsprechend sollte von den deutschen Unternehmen nicht erwartet werden, dass sie noch agressiver als jetzt werden, trotz scheinbar guenstiger Kaufgelegenheiten an den Aktienmaerkten und von Anzeichen fuer einen noch weiter fallenden Dollar. ❑

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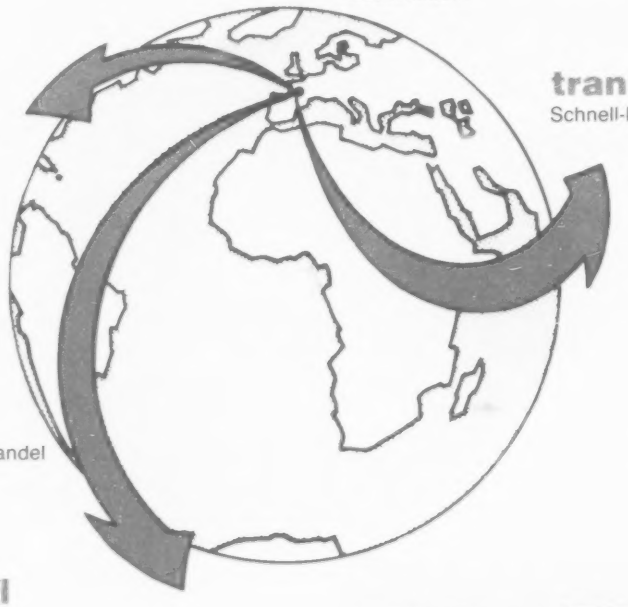

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Strukturelle Aenderungen in den internationalen Finanzmaerkten und ihre Auswirkungen auf den deutschen Markt

Structural Changes on the International Financial Markets and Their Effects on the German Market

Dr. Karl-Herbert Schneider-Gaedicke
Vice Chairman,
Board of Managing Directors
DG Bank
Deutsche Genossenschaftsbank

During the last 15 years the volume of cross-border money and capital transactions has been rising rapidly. The tendency towards 24-hour trading indicated the emergence of global financial markets.

A further indication of the far-reaching change now occurring on the capital markets is the exponential growth of negotiable financial instruments. These financial instruments first had to be constructed by the banks, as the German investor traditionally puts large sums of money into savings deposits or into related forms of non-documented securities. To make these sums available to the economy as capital, and in view of the worldwide increase in risks and the limitation by the banking supervisory authority of the German banks' risk-taking capacity, instruments are required to place these risks with those individuals or organizations that are willing or in a position to bear them in return for a premium or for the chance of making a profit. Furthermore, the needs of investors and debtors differ in respect to risk, yield and liquidity preferences; this leads to an additional need for instruments, maturities and currency alternatives. As the somewhat hectic and unpredictable market fluctuations cause widely differing expectations of future developments, it becomes essential to establish new forward market instruments such as options, swaps and financial futures on shares, interest-bearing securities and currencies.

The instability on the national markets becomes even more pronounced by the transborder flows of international capital. Balance of payments disequilibria and problems of the debtor countries intensify the markets' awareness of risk and their responsiveness to these risks. Today, commonplace information, whether relevant or not, can at very short notice set massive flows of capital in motion, which in a very short time encircle the globe as a result of the electronic media and modern communication techniques. A liberalization of international capital transactions and the removal of restrictions on national capital markets were and are the *conditio sine qua non* for the trend to global integration.

Change and Deregulation

Deregulation began in Germany with the abolition of the coupon tax and continued with the admission of novel instruments. Financial innovations such as floating-rate notes, swap transactions in the form of interest rate and foreign exchange swaps or zero coupon bonds are successful examples of what we have adopted. Other instruments such as certificates of deposit (CDs) were allowed, but this innovation failed to find acceptance on the German market. This is partly due to the fact that CDs with a maturity of less than two years are subject to minimum reserve requirements. Moreover, purchases by non-banks of CDs are subject to a prohibitively high German stock exchange turnover tax. In addition, however, there is an important purely bank technical reason for the fact the CDs

Hamburg's stock exchange was founded in 1558 and is the oldest in Northern Europe.

have not been a success in Germany: in the United States, the CD is essentially a refinancing instrument mainly used by banks located at a financial center, without a network of branches to absorb deposits. Such a type of bank is the absolute exception in Germany. Nevertheless, this instrument can become of substantial importance, for instance during a phase of restrictive policy.

Nowhere is the active pioneer role of the Federal Republic in this development more evident that in comparison with a number of other countries in the European Community. One exception, however, had been the Bundesbank's reluctance *vis-a-vis* the issue of ECU liabilities; but recently, through its approval of ECU liabilities by private persons and companies in the Federal Republic, the German Bundesbank for the benefit of a common internal market orientation, has shelved the doubts and reservations it had long held about this basket currency.

The changes shown here on the financial markets and in the institutions concerned are presently summarized under the terms of deregulation, innovation, securitization and globalization.

It can be seen from the conditions described here that the financial institutions need to take into consideration this rapidly changing situation and have to offer services geared to their customers' requirements. Typical for this development is the emergence of banks as creative financial engineers or financial advisers rather than mere providers of loan, deposits and payment facilities.

Because of the well established German universal bank principle, structural changes in the Federal Republic of Germany are taking place in a less revolutionalry manner than elsewhere. Abrupt changes like *Big Bang* in London in October 1986 with its partly adverse effects are avoided in Germany by flexible reaction on the part of all concerned, including the Bundesbank and the Federal Authority for the Supervision of Banks, to the changing demands and to the market situation. Takeover disputes and insider scandals with all their attendant publicity have been absent from the German stock market. The development towards investment banking takes place continuously and on an increasing scale, but smoothly and free of tension. Traditional commercial banking's share of business has dropped steadily but without causing irritation. Bonds, floaters, note issuance facilties and the issuance of shares have increasingly replaced traditional loans.

Characteristic of the development in the German banking industry is the increasing importance of non-interest earnings, which are achieved particularly in securities and foreign business. Over the last year, according to a survey of the German Bundesbank, the growth of the surplus from non-capital business amounted to 13.9% for the so called big banks, 7.2% for the central savings banks (Girozentralen), 5.6% for the savings banks, and 20.9% for the regional cooperative banks and the DG Bank together.

Restructuring the Stock Exchanges

In view of the enormous growth of the international securities markets, the German stock exchanges have now also come to realize that their time-honored structure will in the Nineties no longer be sufficient to cope effectively with the demands made on a stock market organization or with the handling of securities. The decentralized German stock market system has certain advantages such as the proximity of customers and the decentralization of decisions. But for a competitive structure it could be more practical to concentrate all power in a single market. This would ensure a higher degree of efficiency, particularly in the saving of costs and in the reduction of time needed for information.

Furthermore, there is a growing realization that in future trading in securities, in particular business with big international customers, will no longer be handled through an on-site stock exchange but will be conducted just like money-market or foreign exchange dealings. Communications by satellite and cable combined with computer terminals provide the cheapest and fastest method of

The financial institutions need to take into consideration this rapidly changing situation and have to offer services geared to their customers' requirements.

trading in securities. Modern risk management and up-to-date portfolio management based on international standards are only possible with the support by computer and constantly updated information.

The German stock market scenario has been substan-

tially enriched by the admittance of a new market segment, namely the regulated market. At the same time its structure has been adapted to international requirements and standards.

In addition to improving the organizational framework of the stock market in Germany, increased efforts should be made at a European level, as a result of the intended integration within the European Community in1992, to aim at a single Eurpean capital market which could compete globally with the United States and with an emerging Asian market.

All major financial centers in the world today offer internationally oriented investors efficient financial futures markets. The transactions conducted on these markets serve as a protection against changes in value risks; at the same time, they open up interesting investment opportunities. In the Federal Republic there is presently no efficient market for hedging of investment transactions. To prevent a development in which Germany would permanently and decisively lose her importance as a center in the worldwide competition of banking services and of capital markets, a decision has been reached that it is absolutely essential to set up facilities for internationally competitive trading in options and futures. A special committee is assessing the outlines for such a market and is preparing the relevant statutory changes. Provided that there are no unforeseen obstacles, a German futures exchange should be established by the end of 1989.

In addition to the abolition of the coupon tax, mentioned above, the admission of DM bonds with novel terms (known as final liberalization), the admission of foreign banks as lead managers of DM foreign bond syndicates and the acceptance of foreign banks into the federal bond syndicate have all ensured a revitalization and sustained expansion of Germany as a financial market.

Securitization, i.e. the increasing tendency to shape credits in the form of negotiable instruments, enables the banks to handle assets and liabilities in a manner especially suitable for their customers. The issuer benefits from lower capital procurement costs and higher flexibility which tends to decrease his risks. On the other hand, this development tends to reduce the profit margins for the banks

Last year, investors received almost DM 106 billion in interest payments.

concerned. There is an additional problem banks have to face in the process of securitization: it is precisely their best clients that avail themselves of the new instruments; this can have an influence on the quality mix of the banks' loan portfolios.

A Key International Financial Market

The improvement of the competitiveness of Germany as a financial center provides both a challenge and an incentive for the individual banks.

The challenge lies in the fact that foreign banks discover the markets of the Federal Republic of Germany as potential trading areas of strong growth. On the other hand, all types of institutions of the German banking industry have

DG Bank's headquarters in Frankfurt.

gone abroad and aim at increasing their share of the attractive world financial markets through cooperation, equity investments in banks abroad or their own foreign branches.

A few statistical data may serve to illustrate the scope of the German securities markets. If capitalization is taken as a criterion for the potential of a capital market, the relevant German figures indicate the importance of the Federal Republic of Germany and its leading position. Within the total market capitalization of all countries, which is estimated at about $5,000 billion even after the recent losses , the Federal Republic ranks fourth with about $200 billion. Behind the Japanese and U.S. markets, which top the list by a wide lead, the Federal Republic is meanwhile competing with Great Britain for the imagewise valuable third place. If one takes the German stock exchange turnover which, since the introduction of a new method of calculation at the beginning of 1987, is no longer directly comparable with the figures of previous years, the Federal Republic at least equals the British volume.

The number of securities portfolios held with German banks at the end of 1986 totalled 8.5 million, 250,000 of which had been newly opened in the course of the year. The total financial assets of private households in Germany amount to DM 2,200 billion. This equals more than DM 37,000 per capita—including infants, pensioners and unemployed persons as well as high income earners. Last year, investors received almost DM 106 billion in interest payments. In 1987, private households are expected to additionally save the record sum of DM 150 billion from their disposable income.

It is not surprising that the tremendous size of the German market attracts foreign banks. According to the

latest survey of the German Bundesbank, foreign banks from about 50 countries operate 168 representative offices, 64 branches and 48 subsidiaries with majority holdings in West Germany. The vast majority of these financial institutions are also engaged in investment banking. The foreign banks presently comprise a business volume of more that DM 140 billion compared with a tiny DM 18 billion at the end of 1971.

Similarly, the significance of foreign investors has increased because of the growing quantitative and qualitative importance of Germany as a financial center: in 1986, foreign investors bought a total of DM 58.7 billion of German fixed-interest rate securities; that equalled more than 56% of the total amount of that year's DM fixed-interest rate issues. During the first months of 1987, foreign investors have made even heavier commitments: the volume of their purchases of German public bonds in the first four months approached that of all new borrowings of public authorities for the same period.

In 1986, foreign investors bought a total of DM 58.7 billion of German fixed-interest rate securities...

Foreign investors are also heavily committed to the German equity market. With the acquisition of issued shares costing DM 15.7 billion, they took over an amount equivalent to 50% of the market value of all new issues in 1986.

Although the high proportion of foreign money in the German capital markets results in a heavy dependence of the market trend on the direction foreign orders are taking and, for instance, on market swings, this market structure can be positively assessed in that it contributes to the worldwide integration of the German market and to the professionalization of the stock market.

The financial world is by itself not in a position to determine or to change the conditions obtaining on money and capital markets. The economic system and its relevant legal conditions exercise a fundamental influence. Here the banks can only act in an advisory function and plead for the highest possible degree of equal legal and economic treatment *vis-a-vis* foreign competition.

A number of changes are necessary to allow Germany to reach a commensurate size in the league of world financial centers. First of all, the stock exchange turnover tax, which adds to the cost of trading in securities,must be abolished. The proposed withholding tax on interest income would also hamper efficient, low-cost investments by foreigners in German Securities; its indirect result would be a subsidizing of stock markets abroad at the German taxpayers' expense. From the issuer's point of view, the abolition of the company tax and the removal of discrimination against shares in the property tax would also be desirable.

These brief comments on structural changes on the international capital markets make it clear that the German banking industry not only appreciates the change on the markets in question but also responds to the challenge and actively influences the process. ■

ZUSAMMENFASSUNG

Strukturelle Aenderungen in den internationalen Finanzmaerkten und ihre Auswirkungen auf den deutschen Markt

In den letzten 15 Jahren hat der Umfang von grenzueberschreitenden Geld- und Kapitaltransaktionen rapide zugenommen. Die Tendenz zu einem Handel rund um die Uhr deutet auf das Erscheinen eines globalen Finanzmarktes. Ein weiteres Indiz fuer die auftauchenden weitreichenden Aenderungen in den Kapitalmaerkten ist die rasante Zunahme an erhaeltlichen Finanzierungsinstrumenten.

Heute koennen allgemein zugaengliche Informationen—ob relevant oder nicht—in sehr kurzer Zeit massive Kapitalstroeme in Bewegung setzen. Diese umrunden als Folge der elektronischen Medien und der modernen Kommunikationstechnik in kurzer Zeit den Globus. Eine Liberalisierung der internationalen Kapitaltransaktionen und die Beseitigung von Restriktionen der nationalen Kapitalmaerkte sind conditio sine qua non fuer die Entwicklung einer weltweiten Integration.

Aufgrund des seit langem bestehenden Universalbankensystems sind strukturelle Aenderungen in der Bundesrepublik Deutschland von weniger revolutionaerer Art als anderswo, Ploetzliche Wechsel, wie der "Big Bang" im Oktober 1986 in London mit seinen teilweise gegenlaeufigen Effekten, werden in Deutschland vermieden durch flexible Reaktionen der beteiligten Kreise, wie der Bundesbank und der Spitzenverbaende der Banken, auf wechselnde Anforderungen und Marktverhaeltnisse.

Im Hinblick auf das enorme Wachstum an den internationalen Wertpapiermaerkten haben die deutschen Boersen nunmehr erkannt, dass ihre althergebrachte Struktur in den neunziger Jahren nicht laenger ausreicht, um die Anforderungen an die Boersenorganisation und den Wertpapieraustausch zu erfuellen. Das dezentralisierte deutsche Boersensystem hat gewisse Vorteile, wie die Naehe zu den Kunden und die Dezentralisation der Entscheidungen. Fuer eine wettbewerbsfaehige Struktur koennte es aber nuetzlich sein, die gesamte Kraft auf einen Markt zu konzentrieren.

Die Verbesserung der Wettbewerbsfaehigkeit Deutschlands als Finanzplatz enthaelt sowohl eine Herausforderung als auch einen Anreiz fuer die einzelnen Banken. Die Herausforderung liegt in der Tatsache, dass Banken die Finanzmaerkte der Bundesrepublik Deutschland als moegliche Wachstumsmaerkte entdecken.

Es ist nicht erstaunlich, dass die gewaltige Groesse des deutschen Marktes auslaendische Banken anzieht. Nach dem letzten Bericht der deutschen Bundesbank betreiben Banken aus rund 50 Laendern 168 Vertretungen, 64 Filialen und 48 Tochtergesellschaften mit Mehrheitsbeteiligungen.

Die Finanzwelt selbst ist nicht in der Lage, die geltenden Umstaende an den Geld- und Kapitalmaerkten festzusetzen oder zu aendern. Das Wirtschaftssystem und die einschlaegigen gesetzlichen Bedingungen haben eine fundamentalen Einfluss. Hier koennen die Banken nur eine beratende Funktion haben und um den hoechstmoeglichen Grad an gleicher gesetzlicher und wirtschaftlicher Behandlung im Hinblick auf den auslaendischen Wettbewerb bitten. ❑

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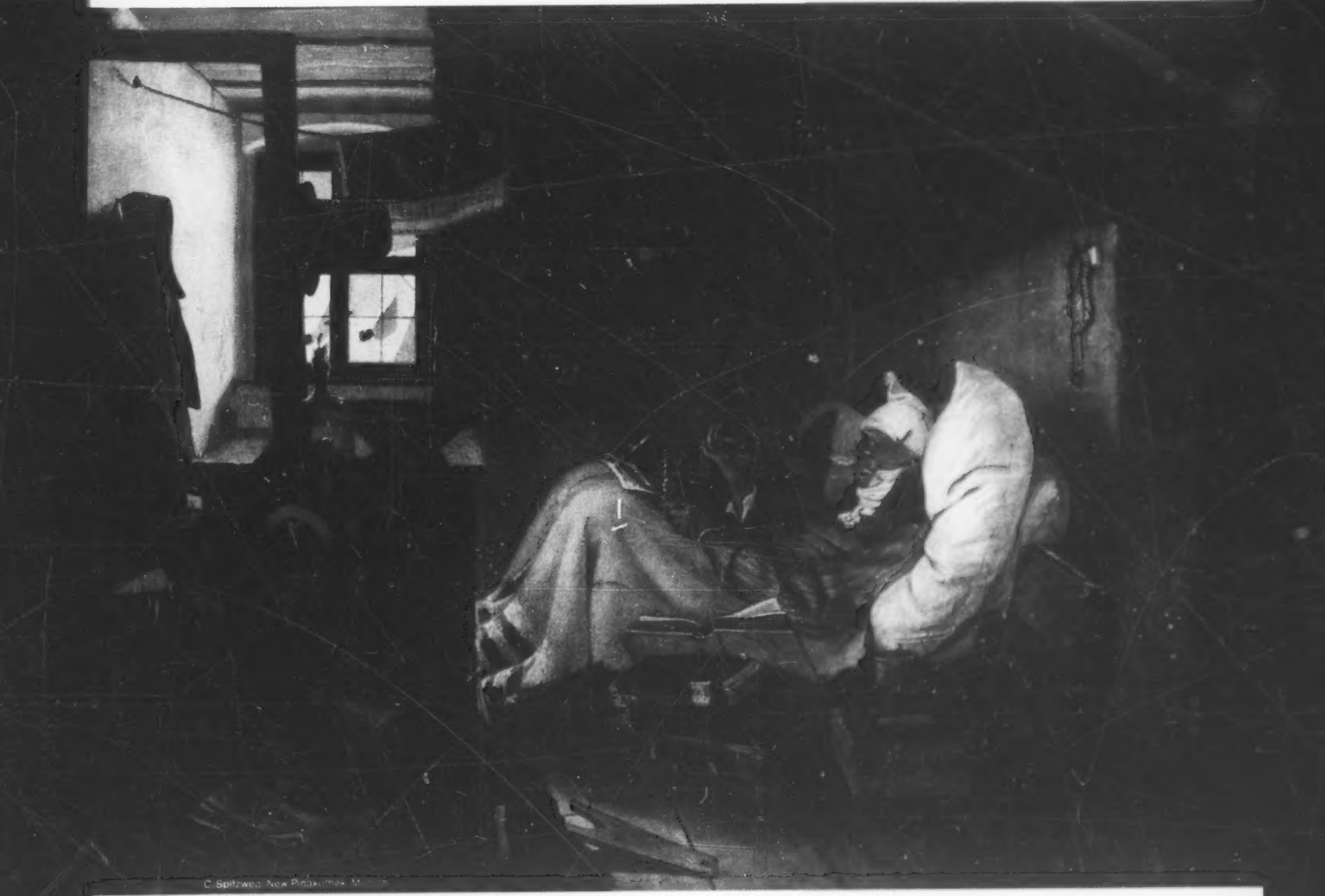

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Der Dollar und die Weltwirtschaft: ein Ausblick

The Dollar and The World Economic Outlook

C. Fred Bergsten
Director
Institute for International Economics

Four major perils threaten the world economy over the next six to eighteen months. All derive from the huge imbalances in the international economic position of the United States and the major surplus countries, especially Japan and Germany. Any or all of these perils could drive the American economy, and the world economy as a whole, into recession. The four perils are:

- A *free fall* of the dollar, as a result of inadequate flows of new foreign investment into the United States, pushing our inflation rate into high single digits and our interest rates well into double digits.
- A major outbreak of protectionism, perhaps via the passage of destructive trade legislation by the Congress, disrupting the international trading system and undermining worldwide confidence in economic cooperation among the major countries.
- A continued failure of the Administration and Congress to agree on a credible program to bring the U.S. budget deficit under control, coupled with a substantial decline in trade deficit and hence inflows of foreign funds, pushing up interest rates and *crowding out* the private sector.
- A failure of Japan and Europe (led by Germany) to achieve adequate expansion of domestic demand, dragging down the world economy in the absence of the American locomotive of the past five years.

Some would add a fifth peril: renewed eruption of the Third World debt crisis. I do not believe, however, that Third World debt on its own will trigger a world economic turndown (or financial crunch). But if the other perils cited were to produce a world recession, particularly one accompanied by higher interest rates or increased trade protection, Third World debt would clearly re-enter the crisis zone and greatly intensify the adverse effects already triggered by such events themselves.

The Decline of the Dollar and the Current Account

Each of these perils derives from the legacy of the huge international imbalances which developed during the first half of the 1980s. The United States ran a current-account deficit of $141 billion in 1986 and that deficit was running at an annual rate of almost $160 billion in the first half of this year. Japan had a current account surplus of about $100 billion in the year ending March 1987. Germany's surplus approached $40 billion during this same period. Taiwan's surplus was $20 billion and Korea's is approaching $10 billion.

Efforts to correct these imbalances have been underway for about two years. The dollar, whose overvaluation in trade terms was the source of about three quarters of the rise of the U.S. trade deficit from 1981 to 1986, has declined by 30-40 percent (depending on which index is used). As a result, adjustment is clearly underway.

In assessing the outlook for the trade deficit, we should focus partly on its performance in volume, or real, terms. It

is primarily the volume of exports and imports that affects jobs and production, and should thus be of particular importance to the Congress as it considers changes in U.S. trade policy (which, for the most part, will not significantly affect the trade balance). The volume figures respond to currency changes much more rapidly than the value numbers, and thus offer a superior picture of trends and the outlook. We now focus for most purposes on real rather than nominal GNP, and must begin to focus at least partly on real trade flows now that price (i.e., terms of trade) changes have become so pronounced.

In volume terms, U.S. trade performance has clearly turned up. Exports of goods and services have been expanding at an annual rate of about 12 percent over the past nine months. Imports are essentially flat. For the second quarter of 1987 alone, the latest period for which data are available, Census data suggest that the volume of merchandise exports is up by 17 percent from the third quarter of 1986 while merchandise import volume has risen by only 2 percent. Not surprisingly, Japan's volume performance in 1986 was almost exactly the opposite—exports flat, imports up almost 15 percent—and the same pattern is continuing so far this year.

The volume improvements in the U.S. trade balance have been largely masked to date by offsetting rises in import prices, and the nominal trade balance has not yet improved.

The volume improvements in the U.S. trade balance have been largely masked to date by offsetting rises in import prices, and the nominal trade balance has not yet improved. We are thus experiencing the J-curve with a vengeance. But adjustment is clearly occurring. Net exports of goods and services, as defined in volume terms in the GNP accounts, have improved at an annual rate of almost $40 billion from the third quarter of 1986 through the second quarter of 1987—a decline of about 25 percent in the deficit, at an annual rate, from its peak in the third quarter of last year. Almost one half of total U.S. economic growth over the past three quarters has come from this trade improvement (just as Germany and Japan achieved about one half their total growth from trade gains during portions of the early 1980s). Hence the United States has begun to experience export-led growth, a pattern which is almost certain to prevail for the next several years (for reasons to be described shortly, relating to its becoming the world's largest debtor country).

These improvements reinforce the view that the underlying competitive position of the United States is quite strong. Prior to the runup in the dollar, which priced many American goods out of world markets, the United States was in fact experiencing export-led growth. From 1978 through 1980, U.S. exports grew twice as fast as world trade. The United States recouped market share in every sector of manufactured trade and in every geographical region, in some cases back to the level of the 1960s. Our current account improved by over $50 billion in just two years, excluding the direct price effects of the second oil shock, and moved into surplus in 1980-81 despite those costs. Since that time, and despite the huge trade deterioration that took place, American productivity in the manufacturing sector—which must account for the bulk of the coming trade improvement—has risen by about four percent annually. America clearly can compete.

Another piece of good news is the modest magnitude of the decline to date in the services component of the U.S. current account. While the United States was experiencing a deterioration of about $400 billion in its net international investment position from 1982 through 1986, shifting from the world's largest creditor country to the world's largest debtor, net investment income remained substantially positive and in fact declined by only about $12 billion. At least through 1986, the world's largest debtor country was also the largest earner of foreign income.

The Adjustment Still Required

Having reported some modestly good news, I must unfortunately emphasize the remaining bad news. Even if the trade balance continues to decline substantially in real terms, the nominal U.S. current-account deficit—which must also remain a focus of attention, since imports are paid for in nominal terms—will not fall much (if any) below $100 billion on the basis of current exchange rates and economic policies in the major countries. Indeed, many respectable forecasters doubt that it will even move within shouting distance of $100 billion.

Hence the officials of the major countries are simply not credible when they assert, as the Finance Ministers have since they met at the Louvre in February, that "the pattern of exchange rates is broadly consistent with underlying economic fundamentals". This would be true only if one believed that U.S. deficits of $100 billion or more, and Japanese surpluses of around $75 billion, were sustainable indefinitely.

These imbalances are clearly not sustainable, for two reasons. The external unsustainability is that foreign investors will simply not finance U.S. deficits of this magnitude indefinitely—and have already stopped for at least some periods of time, including the first four or five months of this year. The internal unsustainability is that protectionism would almost certainly break out in a massive way because our domestic politics will not accept the adverse effects on employment and U.S. industrial structure of such huge deficits. Substantial further adjustment is required.

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There are four ways to achieve this further adjustment:

- Steady and sizable reductions in our budget deficit, which would check our domestic overspending and reliance on capital inflows in an orderly and constructive way;
- A further fall in the dollar, of as much as 20 percent if

relied upon to achieve all of the remaining correction—to say 115:1 against the yen and 1.50:1 against the DM, and by roughly similar magnitudes against the key Asian NICs as well—which could conceivably occur in an orderly way (as in 1985-86) but would be more likely to drive up inflation and interest rates;
- A sharp U.S. recession, which would cut imports along with everything else, but would obviously levy heavy costs on both the United States itself and the world economy (and would hardly produce sustainable adjustment in any event);
- A sharp pickup in economic growth abroad, producing more buoyant markets for our exports and lessening the export drives of our major competitors.
- (I do not cite trade protectionism, which some might list as a fifth option, because I believe it would produce so much foreign retaliation and world economic disruption that our trade balance would experience little if any benefit as a result.)

The key issue of the next six to eighteen months is which combination of these options will prevail. As noted at the outset, I believe that the answer to this question will go far to determine the course of the overall U.S. and world economies during this period.

The Outlook

The first peril, a *free fall* for the dollar, could occur if the markets conclude that the international adjustment must go much farther and that none of the other options are likely to occur.

Indeed, we have already experienced at least the opening phase of such a phenomenon—and phase two may currently be underway. During the first few months of this year, the dollar declined by about 10 percent while U.S. interest rates rose sharply—by as much as 2 full percentage points toward the longer end of the maturity spectrum. This juxtaposition of a falling exchange rate and rising interest rates is in fact the best short definition of a *free fall* of a currency.

This occurred because, on balance, private investors stopped putting money into the dollar. For the first five months of this year, intervention by foreign central banks is reported to have totaled about $70 billion. The U.S. current-account deficit during this period was no more that $65 billion. Hence our external deficit in the first half of this year appears to have been more that fully financed by foreign monetary authorities, indicating that there may in fact have been a net outflow of private capital (including by Americans as well as foreign investors) from the dollar..

This *investment strike* indicates why the sharp rise in interest rates co-existed with a falling dollar (rather that a sharply rising dollar, as in the early 1980s). If the dollar were viewed as likely to fall further by anything like 20 percent, such a *strike* could easily resume. Indeed, market developments since the release of the June trade figures in mid-August suggest that it may have already begun to do so.

My colleague Stephen Marris has estimated that the huge capital inflows associated with a rising trade deficit in the early 1980s held real U.S. interest rates 3-5 percentage points below where they would otherwise have been. A loss of such inflows now, let alone a withdrawal of funds already here, could therefore cause a rise of 3-5 percentage points in real interest rates. This would come in addition to the rise in nominal rates associated with the temporary pickup in inflation which would also accompany a further decline in the dollar, pushing the level of nominal interest rates well into double digits—certainly for longer maturities, perhaps for short-term paper as well.

Hence a *free fall* of the dollar could push the U.S. economy into recession. The future trade gains which would result would only emerge after a year or so, and might not in any event offset the adverse effects of higher inflation and higher interest rates. Unfortunately, such a *free fall* now looks quite likely in light of the pessimistic prospect for alternative adjustment mechanisms.

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The second peril is a major outbreak of trade protection. Such an outbreak could be triggered by the United States, if Congress passed clearly protectionist trade legislation (and overrode a Presidential veto) or the Administration sought to preempt such an outcome by adopting new protectionist devices itself *a la* President Nixon's import surcharge in

Exports ready for shipment at the container terminal in Bremerhaven.

1971. It should be noted that the trade bills passed by both houses of Congress, on which they have begun conferencing, are not modern equivalents of the Smoot-Hawley tariff. With one or two minor exceptions, they do not impose higher import barriers on specific products. The bills do, however, represent an even more insidious threat: a sharp escalation of the *process protection* through which the U.S. trade laws are made more amenable to protectionist petitions. Over a period of five or ten years, therefore, they (and the inevitable *mirror legislation* and retaliation by other countries) could produce a major seizing up of the world trading system.

The postwar history of U.S. trade policy shows that dollar overvaluation and a large trade deficit are the most accurate leading indicators of protection, because they dramatically alter the balance of our trade politics—sharply increasing the forces which seek protection and paralyzing many of those which oppose it. Hence a failure to achieve a true equilibrium exchange rate for the dollar, and to cut the trade deficit much further, clearly risks such an outbreak. But a protectionist surge could also be triggered by further European restrictions on agriculture, or a perceived failure of Japan and the Asian NICs to truly open their markets, or via a number of other channels.

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Any new protectionist surge could disrupt the entire trading system. By doing so it would raise major doubts about the economic future of all export-dependent countries, reignite the Third World debt crisis, and cast doubts on the basic structure of international economic cooperation by raising the specter of the 1930s. This latter effect would in turn have a chilling impact on investment plans throughout the world, and even consumer confidence, and could thus turn a sluggish economic outlook into a full-blown downturn.

From the standpoint of the United States, a move toward protectionism at this time would be the height of folly. As noted, we must achieve export-led growth ourselves for the next several years. Our competitive position has begun to improve sharply, and much more improvement is already in the pipeline, Other countries will be experiencing trade balance losses, some of considerable magnitude. They in turn will be coming under growing protectionist pressure. Any American steps which gave other countries an excuse to restrict imports would move directly counter to our own major national interests, as well as disrupting the global system as just described.

The third peril is a failure of the United States to launch a credible and sizable reduction of its budget deficits in the context of a falling trade deficit. A falling trade deficit of course means a decline in net capital inflow, even if foreign confidence in the dollar were fully maintained, because the two numbers must be identical. If the budget deficit remained anywhere near $180-200 billion, however, that reduced inflow from abroad would mean that total *ex ante* demand on our credit markets would far exceed the *ex ante* supply of funds.

This would of course drive up interest rates, and could also produce a recession. Our budget deficit will record a sharp decline of about $60 billion in the current fiscal year, but a significant part of that decline is clearly due to temporary factors and the deficit now looks like it could rise again in 1988 and 1989—so could well remain in the danger zone posited by this scenario.

To avoid these first three perils, the United States must reduce its budget deficit by another $30-40 billion annually over the next three to four years. This would obviate the need for a further sharp fall of the dollar to restore equilibrium in the trade balance, yet help achieve such adjustment and thereby limit the risk of more trade protection. By directly cutting the demand for investible funds, it would reduce the risk of *crowding out.* In all these ways, correcting the budget deficit offers by far the best prospect for avoiding extremely adverse outcomes for the U.S. economy.

If the United States were to set its fiscal policy on such a path, however, the growth of world demand would be jeopardized. The United States would clearly be seeking export-led growth, to bring the current-account deficit down and to offset the fiscal drag. Its domestic demand would probably grow quite slowly. It would certainly grow more slowly than GNP, by the amount of the improvement in the trade balance,-a reversal of the situation from 1981 through 1986 (which reversal, as noted above, probably began with the fourth quarter of 1986).

But this scenario leaves the key question of where the world economy would receive its growth leadership, and this poses the fourth peril—that the major countries abroad, notably Japan and Germany (as a proxy for Western Europe), will not move far enough fast enough to provide such leadership. In that case, the world economy would clearly slip into recession.

Japan has launched a significant expansion effort, but its net effect remains to be seen. There is little evidence that the European countries are moving. Indeed, perhaps the most damning current judgment on the Louvre accord would be that the time it bought via stabilizing exchange rates has not been used effectively to put decisive policy changes in place. To the contrary, a degree of complacency seems to have developed in some countries and the process has simply not progressed satisfactorily.

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Fortunately, Japan and Western Europe (led by Germany) are still in an ideal position to pick up the growth leadership:

— their inflation rates are very low;

— their external surpluses are very large;

— their budget deficits have declined to very low levels,

The leaders of the seven major industrial powers met at the 1985 Economic Summit in Bonn.

particularly when compared with their very high rates of national savings (and thus their ability to finance such deficits);
— unlike the United States, they have had no catch-up growth spurts since the world recession of 1982;
— hence their unemployment rates are as high as in the last recession, or even higher (as in Japan).

These countries need to adopt whatever additional expansionary measures may be needed, mainly through an acceleration and increase in the magnitude of planned tax cuts and other fiscal steps, to boost the growth of their domestic demand by at least two percentage points for at least the next two years. This would maintain world growth at a respectable level, reducing the risk of added protectionist steps and a resurgence of the Third World debt crisis. It would also spur U.S. exports by about $40 billion annually when the cumulative effects of such growth were complete, obviating the need for much of the dollar decline that would otherwise be required.

Debtor America and Creditor Japan

The longer-run implications of the current imbalances also raise the specter of major disruptions of the world economy. The net foreign debt of the United States will total about $400 billion by the end of 1987, and the net creditor position of Japan will exceed $250 billion. America's debt and Japan's surplus will rise to at least $700 billion and $400 billion, respectively, before leveling off —and could well reach much higher numbers.

My own view, contrary to some, is that net debtor status *per se* need not represent an overwhelming problem for the United States and the world economy. This is partly because *net creditor* status was never terribly important to the United States: it was only 4 percent of GNP when it peaked in absolute terms in 1981-82, compared with the United Kingdom's creditor position of 180 percent of GNP in 1914, and America's net income from foreign investment never exceeded 1.2 percent of GNP (whereas the UK's earnings reached 7-8 percent). It is also because the deterioration of America's net foreign income is much less rapid than the decline of the international investment position itself, as noted above, and could well turn out to total less than 1 percent of GNP.

If the United States can restore a sustainable equilibrium in its current-account position, via responsible cuts in the budget deficit and without reigniting rapid inflation, the existence of a negative international investment position need not be crucial—any more that the existence of a sizable international creditor position protected the United States against massive runs on the dollar in both 1971-73 and 1978-79.

In addition, the huge volume of America's external liabilities will provide a consistent source of potential downward pressure on the exchange rate of the dollar, requiring more cautious economic (particularly monetary) policies on the part of the United States. The psychological, as well as tangible, effects of America's new financial position may undermine to some extent the international role of the dollar—since no debtor country, let alone the world's largest debtor country, has ever played a key currency role in the past. There may even be important foreign policy and international security implications, as

...the huge volume of America's external liabilities will provide a consistent source of potential downward pressure on the exchange rate of the dollar...

the ability of the United States to continue leading its alliance systems is juxtaposed with its growing debtor status in both domestic American politics and by its partner counties abroad. So debtor status for America will hardly be without its costs, and those costs could be extremely high if the restoration of current-account equilibrium is delayed much further.

Reforming the Monetary System

The other structural implication for the longer run involves the international monetary system itself. The events of the 1980s make clear the failure of unmanaged flexibility of exchange rates. The unprecedented magnitude of the exchange-rate imbalances and the required adjustments indicates how inadequate the system has become in achieving its central objective of a stable and balanced world economy.

The Bretton Woods system of fixed exchange rates collapsed in 1971-73 because it had permitted the dollar to become overvalued by about 20 percent. The floating rate system that followed, however, permitted the dollar to become overvalued by more than 40 percent at its peak in early 1985. This result alone is a fatal indictment of the present regime, the source of spreading dissatisfaction throughout the world and a spur to the search for a better alternative. Indeed, the finance ministers of the G-5 nations admitted at the Plaza in 1985 that covergence of national economic performances had not achieved international monetary stability, as they had been promising it would, and that direct governmental intervention was required.

The monetary system has also failed to defend an open system for world trade. It is a paradox of the 1980s that international capital flows have been increasingly liberalized while international trade has been increasingly protected. There would seem to be a casual link between

...the finance ministers of the G-5 nations admitted at the Plaza in 1985 that convergence of national economic performances had not achieved international monetary stability...

the two trends: the added scope for capital flows accelerates the gyration of currencies under a regime of flexible exchange rates, often driving exchange rates away from levels that would tend to restore trade to equilibrium and thus bringing on the huge imbalances that intensify protectionism.

It would be far better to reform the monetary system than to reverse the liberalization of capital flows, but one of these two courses may be necessary to avoid continued movement away from open trade.

The third criticism of the current monetary system is its failure to affect economic policy in the major countries. Some observers absolve the system, charging that it is faulty national policies that have caused the imbalances of the 1980s. Some go further, arguing that no system could have withstood the pressures created by the opposite movement of fiscal policies in the major countries (into massive deficit in the United States, sharply lower deficits in Japan and Germany) and those countires' neglect of the international impact of their actions.

As indicated already, I fully concur in the indictment of many recent policies in the major countries. But to segregate national policies from *the system* is to set up a false dichotomy. No international system is worthy of the name unless it has consequential impact on national policies and tilts them in the direction of greater international compatibility—and thus sustainability.

Indeed, many previous and current systems have done so to a significant decree. Under the fixed-rate rules of Bretton Woods, most countries consistently met the obligation to defend their currency parities. (In fact, they did so too well; the system collapsed because of inadequate currency flexibility.) Most of continental Europe does so now under the adjustable-peg requirements of the European Monetary System. Trade policy in almost one hundred

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countries is determined importantly by their international obligations under the GATT and the costs (via compensation or retaliation) of taking trade actions that violate those commitments.

The need for such systemic influence is particularly acute in the United States. As the largest and most self-sufficient national economy, the United States is quite naturally tempted to try to export its internal problems more than most countries—and it usually succeeds for longer periods of time (as in the late 1960s and early 1980s, when foreigners financed the growing U.S. budget and external deficits). But the chickens eventually come home to roost even for the United States, which then—as with the Smithsonian agreement in 1971 and the Plaza agreement in 1985—must seek international action to rectify its external difficulties.

The history of U.S. foreign economic policy over the past generation shows that every administration, Republican or Democratic, has begun with essentially unilateral efforts to impose it macroeconomic and monetary views on the rest of the world. The inevitable failure of these efforts then forces the incumbent administration to resort to pluralistic cooperation—President Johnson's to two-tier gold in 1968, Nixon's to the Smithsonian accord and the negotiated realignment of 1973, Carter's to the Bonn summit and dollar defense program of 1978, Reagan's to the Plaza agreement. Once achieved, the focus on international cooperation tends to remain intact for the remainder of that administration.

But the successor regime forgets or rejects the lessons of the past, and the dreary cycle is repeated once more. To help forestall this seemingly endemic American pattern of retrogression, and thereby to promote their own vital interest in achieving a more consistent system of effective global cooperation, the other major countires should seize with alacrity recent offers made by the United States to work out more permanent systemic rules via agreed *reference ranges* for currency relationships and *indicators* to guide the coordination of national economic policies.

The issue is not whether the United States and other countries will adjust to the realities of global interdependence. Though countries cling jealously to absolute nominal sovereignty, real economic sovereignty has long since

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eroded substantially. Despite the periodic efforts by governments to play King Canute, they cannot escape from reality. Policies must be internationally compatible to be sustainable, and the avoid levying huge costs on all parties. The only question is one of timing: whether countries will adjust in a reasonably timely and efficient manner, or try to fend off the inevitable for so long that huge costs arise and crises erupt.

One would hope that the international economic crisis of the late 1980s, like that of the early 1970s, will lead *inter alia* to the creation of a new international monetary regime —and, this time, to one that is more stable and lasting. There is no need to return to fixed parities. There is enormous need to avoid future massive misalignments such as we have seen in the recent past, which carry such heavy costs for surplus and deficit countries alike. The goal should be a synthesis between Bretton Woods, which became too rigid, and the flexibility of the current regime, with its endemic overshooting and misalignments (and, some would add, excessive volatility).

As the largest and most self-sufficient national economy, the United States is quite naturally tempted to try to export its internal problems more than most countries...

There are numerous ways to achieve such a synthesis. The most promising is to adopt a framework of target zones, under which the major countries would agree on targets for their external positions and then set currency margins of perhaps 15 to 20 percent to help achieve such outcomes. The authorities would alter the ranges over time to reflect differential inflation rates, differences in productivity growth, and shocks (such as large oil price changes) which have different effects on the various currencies.

Floating would remain the day-to-day norm, but authorities would act whenever rates moved toward the edges of the zone. They could start with Plaza-type jawboning and intervention, and make changes in monetary policy if necessary. Fiscal and other policies would then be adjusted to maintain internal stability. In essence, the world's economic managers would view the whole array of potential policy instruments through the lens of the exchange rate and use whatever tools were appropriate at a given time to achieve their internal and external economic goals.

Once the regime was in place and seen to be working, because governments were prepared to alter policies to defend the zones, private capital flows would become stabilizing—rather than destabilizing, as with the band wagon capital movements under unmanaged floating—and would reduce the need for further official intervention.

Conclusion

Both the short-run and longer run implications of today's huge international imbalances call for urgent additional policy actions, by the United States and the major surplus countries, to bring those imbalances under control and to shore up the system for the future. The American and world economies already face several risks of considerable magnitude. Further steps of substantial magnitude are needed to correct the imbalances, beyond the decline of the dollar to date and other policies already adopted.

The nature of these further corrections, as well as their magnitude, is crucial. A *free fall* of the dollar, or *adjustment* via a U.S. recession, or an outbreak of trade protection in the United States, could create *cures* which could be worse than the disease. It remains imperative to achieve the remaining correction via a credible reduction of the American budget deficit and a sharp pickup of growth abroad.

Some further currency realignments are probably needed, and in such a context could occur in an orderly manner. Moreover, the United States will be able to respond effectively to the next turndown in its economy only if major fiscal and dollar adjustment are pursued

The most recent Economic Summit was held in 1987 in Venice.

now—before that inevitable turndown occurs.

In the absence of such constructive changes, there is considerable risk—even a likelihood—of a renewed *free fall* of the dollar in which financial instability is accompanied by a sharp rise in American interest rates and further reductions in the international competitiveness of Japan and Europe, pushing the world economy into recession. Indeed, in the absence of constructive policy changes, it is hard to imagine that the monetary authorities of the United States or the other key countries would be prepared to commit substantial resources in an effort to avoid the inevitable. A renewed effort to make decisive changes in macroeconomic policy on both sides of the Atlantic and Pacific must therefore be the major task of economic policy over the coming months.

A free fall of the dollar, or adjustment via a U.S recession, or an outbreak of trade protection in the United States, would create cures which could be worse than the disease.

In light of the continued reluctance of key European governments to play their full role in this process, it may be necessary for the United States and Japan to move ahead on their own. Such a *Group of Two* was in fact instrumental in triggering the adoption of reference ranges earlier this year, as the Baker-Miyazawa agreement of October 1986 produced significant concern in Europe of *being left behind* and led directly to the Louvre accord of February 1987 in which all of the major countries participated.

A *G-2* would thus be largely a tactical device, to avoid holding international monetary cooperation hostage to the least common denominator, but these two largest world economies should be prepared to cooperate substantively on their own if it turns out that only such an effort can avoid the four perils cited and prevent major damage to the global economy as a whole. ■

This article is based on address at the Wallenberg Bankers Forum, School of Foreign Service, Georgetown University, Washington, D.C., September 28, 1987.

ZUSAMMENFASSUNG

Der Dollar und die Weltwirtschaft: ein Ausblick

Auf die Weltwirtschaft kommen in den naechsten 6 bis 18 Monaten hauptsaechlich vier Gefahren zu. Diese sind:

- der freie Fall des Dollars
- ein verschaerfter Protektionismus
- ein weiteres Versagen der Regierung und des Kongresses der USA bei der Einschraenkung der Ausgaben und des Budgetdefizits
- Verweigerung Japans und Europa's bei den Bemuehungen um eine Ausweitung der Inlandsnachfrage.

Sie sind das Ergebnis des grossen Handelsbilanzdefizits der USA gegenueber den Laendern Japan und Europas, mit ihren hohen Ueberschuessen. Jede kann in den folgenden Monaten die amerikanische Wirtschaft, die gesamte Weltwirtschaft, in eine Rezession stuerzen.

Die Gefahren sind aus den 80er Jahren mit ihren hohen Defiziten abzuleiten. Das Bilanzdefizit der USA von 1986 mit 141 Mrd. US-$ hat sich bis 1987 auf 160 Mrd. US-$ gesteigert. Andererseits hatte Japan einen Ueberschuss von 100 Mrd. US-$ und Deutschland 40 Mrd. US-$ zum Maerz 1987. Taiwan erwirtschaftete einen Ueberschuss von 20 Mrd. und Suedkorea von 10 Mrd. US-$.

Die Nachkriegsgeschichte zeigt, dass Dollarueberbewertung und das steigende Handelsbilanzdefizit, die staerksten Kraefte fuer die Entwicklung des Protektionismus sind. Das dramatische Ansteigen der Defizite hat die Entwicklung der protektionistischen Tendenzen beguenstigt und andere Stimmen zum Schweigen gebracht.

Jeder neue Protektionismus kann aber das gesamte Welthandelssystem stoeren, die wirtschaftliche Zukunft aller exportabhaengigen Staaten komplizieren und die Dritte Welt in eine tiefe Krise stuerzen. Fuer diesen Fall werden die internationalen Auswirkungen dem Szenario von 1930 gleichen. Insgesamt wird ein neuer Protektionismus der USA einer Fehlleitung der politischen Kraefte gleichkommen.

Ein weiteres Problem ist die Struktur des internationalen Geldwirtschaftssystem. Die Ereignisse zeigen den Fehler von weithin ungeregelten flexiblen Wechselkursen.

Die Geschichte der amerikanischen Aussenwirtschaftspolitik der letzten Jahre zeigt, dass jede Regierung der USA, sei sie republikanisch oder demokratisch, mit einer einseitigen Politik die Volkswirtschaft und internationale Geldwirtschaft beleben wollte. Das unvermeidliche Scheitern an dem hochgesteckten Ziel mit den falschen Mitteln zeigt die Neigungen und Effizienz der Regierungen im Umgang mit multinationalen Wirtschaftsproblemen.

Die Frage ist nicht, ob die USA oder andere Laender die Realitaeten der internationalen Abhaengigkeiten und Verflechtungen erkennen. Die kurz- und langfristigen Auswirkungen des Ungleichgewichts rufen nach zusaetzlichen politischen Anstrengungen der USA und der grossen Ueberschusslaender, um das System fuer die Zukunft zu retten. Dabei zeigen die Amerikanische und die Weltwirtschaft unterschiedliche Komponenten und Risiken, die eine differenzierte Politik notwendig machen. Dabei hat der schwankende Dollarkurs schon zu verschiedenen Politikaenderungen gefuehrt.

Im Licht der starken Abneigung der hauptsaechlichen europaeischen Regierungen in der Aussenwirtschaftspolitik die ihnen zustehende Rolle zu spielen, macht es Sinn, wenn die USA und Japan eigene Wege gehen. Diese Zweiergruppe wird die Moeglichkeit haben, die waehrungswirtschaftlichen Verflechtungen in Bezug auf ihre Probleme auf einen Nenner zu bringen.

Die beiden groessten der Weltwirtschaft sollten jedoch vorbereitet sein selbst grundsaetzlich zusammenzuarbeiten. Dieser Fall wird eintreten, wenn die 4 Gefahren fuer die Weltwirtschaft nur durch sie abgewandt werden kann, um eine fuer alle Beteiligten schwerwiegende Schaedigung des Weltwirtschaftssystems zu verhindern. ❑

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Finanzierungsalternativen fuer US-Firmen in der Bundesrepublik

Financing Alternatives for U.S. Firms in the Federal Republic

Thomas J. Kuhnke
Vice President and General Manager
Morgan Guaranty Trust Company
Frankfurt Office

When financing their overseas operations, multinational U.S. corporations wish to make the most effective use of their global balance sheets. In order to optimize the mix of financial instruments available in any given location, it is desirable to have a centralized financial management group to decide on funding strategy, maturities, arbitrage policies, foreign exchange exposure, tax policies, liquidity issues, etc., as well as a sophisticated management information system to tie it all together. Under these conditions, the overseas subsidiary's operations can be integrated effectively into the parent corporation's overall financial management by fully utilizing the financing alternatives offered by the host country's banking system and securities markets.

Significant changes in trade flows over the recent past—which were caused by and which themselves caused enormous swings in the relative exchange rates—have proven once again that growth and competitiveness of multinational corporations depend vitally on their presence in and ability to take advantage of all major trading areas and their respective financial markets. The European Community is the largest trading community outside the U.S., and Germany is its leading economy.

U.S. corporations are active in the German market in many different ways: through sales and distribution outlets, through subsidiaries with their own production facilities and through the wholesale acquisition of indigenous German corporations. Total U.S. investment volume in the Federal Republic of Germany at year-end 1986 amounted to almost DM 45 billion, yielding a dividend flow of more than DM 3 billion for 1986.

At the basis of Germany's economic strength lie the 60-million nation's work ethic, its high propensity to save and

The Federal Republic has become the third largest economic power after the U.S. and Japan, with a volume of international trade which is second only to the U.S.

invest, its well-educated and highly skilled labor force, and its comparatively peaceful relations between management and unions. Industry has a strong tradition of quality production and after-sales service, while it relies on an exemplary infrastructure which has been rebuilt after World War II with the help of the Marshall Plan, whose 40th anniversary we celebrated earlier this year.

These factors have served to offset a number of disadvantages, such as the lack of raw materials, dependency on fuel imports, and its high unit labor cost as the result of union accommodation. The Federal Republic has become the third largest economic power after the U.S. and Japan, with a volume of international trade which is second only to the U.S. It is a country with a great degree of political stability and a liberal economic policy, committed to the

free trade of goods and services. These facts, combined with full convertibility, have made the Deutsche Mark the second most important currency in international trade and financings, as well as a major reserve currency.

Germany's Financial Markets

The German financial markets, although different from the U.S. markets in a number of respects, offer many of the same products. In the absence of a Glass-Steagall-type separation of commercial and investment banking, Germany's banking system is characterized by the existence of so-called universal banks which come in three basic varieties:

- private commercial banks (representing about 30% of the market);
- public credit institutions (savings banks and their clearing houses with approximately 50% of the market); and
- credit cooperatives (accounting for about 20% of the market).

Being universal, all of these banks not only carry out deposit, credit and payment transaction business, but

Frankfurt, financial center of the Federal Republic.

also provide investment banking services, and they underwrite, trade and distribute securities of all kinds.

Apart from the commercial banks, there are numerous specialist banks which are more narrowly dedicated to certain fields, such as mortgage banking, installment sales,

Germany's banking system is characterized by the existence of so-called "Universal Banks"...

financing institutions, postal savings banks and giro offices, shipping banks, building societies, etc.

Not to be overlooked are the major German insurance companies which—due to favorable investment and tax regulations—are able to offer extremely advantageous terms in the area of long-term financings, such as private placements for both debt and equity, and leasing arrangements.

Germany's public-debt and equity markets reflect the federal character of the country. There are eight securities exchanges, one each in the cities of Hamburg, Bremen, Berlin, Duesseldorf, Hannover, Munich, Stuttgart and—accounting for almost three-quarters of the total volume transacted—Frankfurt. This split into regional units leads to a number of inefficiencies. Thus, the importance of Frankfurt as an international financial center is less than one would expect, given the size of the DM money and capital markets which are closely behind the big three (New York, London and Tokyo), and given the strength of the economic hinterland it represents.

Foreign Banks in Germany

Frankfurt's banking community today is comprised of 379 credit institutions, which rank the city second in Europe behind London. Of the 233 foreign banks with a Frankfurt location, 162 are subsidiaries, 44 are branches, and 127 are representative offices.

The combined market share of all foreign banking institutions in Germany amounts to no more that 5%. The 40 U.S. banks hold the largest share with DM 47 billion, followed by EC-based institutions with DM 45 billion, and 17 Japanese banks with DM 24 billion. 40% of the assets and 57% of the liabilities result from interbank business: another 17% of assets are held in the form of securities, and only the remaining 33% represent C & I loans.

The foreign banks tend to concentrate on the financial requirements of a small number of internationally oriented companies and high-net-worth individuals which some-

Frankfurt's banking community today is comprised of 379 credit institutions, which rank the city second in Europe behind London.

what distorts the picture. Furthermore, this market-share figure does not adequately reflect the foreign banks' full impact on the German market because it does not take into account business which results in bookings at a bank's office outside Germany and off-balance sheet transactions such as swaps.

Thus, the fact remains that the foreign banks' market share really is quite small. This reflects the dominant position of the German universal banks with their strong influence over a company's banking relationships through their control of both debt and equity products. In Germany, the role of the Hausbank still is very much a reality for many companies, and only some of the very large multinational companies have begun to handle their banking relationships with more independence. It is only fair to point out, however, that the Hausbank-concept can have tangible advantages for the company, too, in that the bank's commitment to the client goes beyond mutual business in fair-weather days.

At any rate, it is advisable for a U.S. corporation doing business in the Federal Republic to develop a good relationship with one or more solid German banks, as well as with their traditional U.S. bank represented in Germany, in

order to take advantage of differences in their business strategies, resulting in variations in knowledge, products and pricing.

Financial Instruments

The range of financial products available to firms operating in Germany is very similar to, if more limited than that offered in the United States.

Multipurpose Bank Lines of Credit:

A multipurpose bank line is the most typical form of short-term financing and is available at both German banks and branches/subsidiaries of foreign banks. Such a facility provides the option to borrow on a short-term basis under the various mechanisms listed below. Since these lines usually do not provide for commitments, documentation is simple and availability is almost immediate.

- Overdrafts
  Unlike in the U.S. current accounts may be overdrawn without any notice to the bank, always provided that there has been agreement beforehand with the bank in question up to what amount the account may go into debit.
- Short-Term Advances
  These are usually one- to six-month advances (occasionally longer terms can be negotiated) which are made available either in domestic DM, priced at a spread over the corresponding Frankfurt Interbank Offered Rate (FIBOR), or on a Euro-DM basis priced at a spread over LIBOR. They are fixed-rate advances and generally may not be prepaid without penalty.
- Bill Discounting
  Short-term trade transactions involving Germany can be financed for up to 90 days via trade bills which are eligible for rediscount with the Bundesbank.
- Bankers' Acceptances
  Privatdiskont AG, a joint venture by a number of leading German banks, is a private market maker in bankers' acceptances, with its own refinancing facilities with the Bundesbank. The discount rate charged by this bank is somewhat higher than the Bundesbank's discount rate, and the full stamp duty is applicable.
- Call-Money Borrowings
  Most banks are prepared to quote, for bridge financing purposes only, and as an alternative to the relatively high overdraft rate, special daily interest rates for individually negotiated overnight advances of size, e.g., for DM 10 million minimum.

A multipurpose bank line is the most typical form of short-term financing and is available at both German banks and branches/subsidiaries of foreign banks.

Loans/Placements/Bonds/Swaps:

- Revolving Commitment
  A variety of committed bank facilities in the form of revolving credits, sometimes convertible into term-loans, may be structured in forms similar to those used in the U.S. market where funds can be borrowed, repaid and reborrowed during the revolving period. The term is usually up to five years, but can be negotiated for longer periods.
- Fixed-Rate Term Loan
  Such loans are available for a term of up to five years (and occasionally out to seven years) either on a committed or on a best-efforts basis. Key features of such longer-term fixed-rate bank financing are the amounts available in DM, the tailor-made maturity profile to suit the particular needs of the client, competitive pricing for interest rate and fees, and negotiable prepayment conditions.
- Shuldschein Placement
  Schuldschein loans are DM-denominated, fixed-rate bank loan equivalents of private placements which are, however, quite different from private placements in the U.S. Under German law, a Schuldschein borrowing is a loan evidenced by a written promissory letter (Schuldschein) which is deemed a certificate acknowledging indebtedness. The loan is constituted under a letter of agreement and comes into existence upon the initial payment out to the borrower of the principal amount. The promissory letter serves only as evidence of the existence and of the terms of the loan, but is not an enforceable instrument in and of itself. Due to this structure, a Schuldschein is not a negotiable security, it is assignable but not tradeable, and it is not subject to listing on a securities exchange.

Schuldschein loans are DM-denominated, fixed-rate bank loan equivalents of private placements which are, however, quite different from private placements in the U.S.

- Domestic DM Corporate Bonds
  The domestic German bond market is presently the third-largest in the world after the U.S. and Japanese bond markets. At the end of 1986, the total volume of bonds outstanding was almost 1.2 trillion.

  The main issuers of domestic DM bonds are German public authorities, i.e., the Federal Government and its agencies, the German States and Municipalities as well as the Federal Railways, the Post Office and other German government institutions. Other issuers are public-sector banks, Landesbanken and private-sector mortgage banks.

  Corporate bonds issued domestically require approval by the Federal Ministry of Finance under Article 795 of the Civil Code, and they need clearance from the Central Capital Market Committee. Also, bonds issued by corporates are subject to the Boersenumsatzsteuer (securities exchange turnover tax) of between 12.5 and 15 basis points on the face amount at each trade. Finally, such domestic corporate bonds were subject to a 25% withholding tax from 1965 until 1984, and will again become subject to a newly announced 10% withholding tax to be imposed sometime in 1988.

Deutsche Bundesbank, the German federal bank in Frankfurt.

- Euro-DM Bonds
  Euro-DM bonds are debt obligations denominated in DM and issued by non-German borrowers (including offshore vehicles of domestic German borrowers). The bonds are issued in bearer form in denominations of DM 1,000 and DM 10,000 for fixed-rate issues and in larger denominations for Floating Rate Notes (FRN's). Payment of interest and principal is free of withholding taxes: it appears that the planned 10% withholding tax on certain German debt obligations will not apply to Euro-DM bonds.

  Thus, the Euro-DM market is primarily represented by securities of non-resident borrowers. They include sovereign entities, public authorities, supranationals, corporate issuers and banks. Additionally, a number of German borrowers use offshore financing vehicles to raise funds in the Euro-DM market.

  In the case of a German subsidiary of a U.S. corporation, a Euro-DM bond would be issued by one of the parent company's non-German entities which would

The Euro-DM bond market...continues to be one of the major international capital markets, ranking third behind the Euro-Dollar and the Euro-Yen markets.

then downstream the proceeds to the German subsidiary in an intercompany financing. There are, at present, no regulatory restrictions applicable to intercompany financing with the exception of thin capitalization rules from the side of the German tax authorities.

The Euro-DM bond market (or more precisely, the market for international DM bonds) continues to be one of the major international capital markets, ranking third behind the Euro-Dollar and the Euro-Yen markets. At the end of 1986, there were DM 141 billion of Euro-DM bonds outstanding, representing 12% of the overall DM bond market. New issue volume has risen from DM 15 billion in 1983 to more than DM 35 billion in 1986.

In May 1985, the Bundesbank introduced a number of measures doing away with restrictions which had governed the issuance of Euro-DM bonds until then. Since May 1, 1985, DM bond issues may be swapped immediately following issuance, the subsequent growth of the DM swap market has greatly enhanced both the development of the DM as an international borrowing currency and the increase in variety of financing instruments to satisfy the needs of borrowers on the one hand and issuers on the other. These instruments now include:

— Bullet (or Straight) Bonds
— Zero Coupon Bonds
— Perpetual Bonds
— Partly Paid Bonds
— Dual Currency Bonds
— Annuity Bonds
— Share Index-Linked Bonds
— Bonds with Debt, Equity, or Currency Warrants
— Naked Warrants
— FRN's
— Capped FRN's

As in other Euro markets, there is a distinction between private placements and public issues. Public issues must be listed on at least one German stock exchange whereas private placements are not listed. Private placements have larger denominations and generally provide a higher yield to investors than public issues, reflecting their relative lack of liquidity. The

Currency swaps, parallel loans and back-to-back loans employ similar techniques in order to achieve the same objective.

size of private placements tends to be between DM 25 million and DM 75 million. The size for fixed-rate public bond issues normally varies between DM 100 million and DM 300 million, and for FRN's between DM 200 million and DM 1,000 million. Public issues must have a minimum life of five years, private placements of three years. Fixed-rate Euro-DM bond maturities generally range from five to ten years, although longer bonds have occasionally been issued.

- Cross-Currency Borrowings
  The underlying concept of a currency hedge is that of creating a borrowing in a desired currency via the mechanism of borrowing in another currency in combination with a hedge of the principal amount and the interest payments involved. The equivalent of medium-term fixed-rate DM financing can thus be created by combining U.S.-Dollar fixed-rate debt with spot and forward foreign exchange contracts. The proceeds of the U.S.-Dollar borrowing are sold spot for DM and a series of forward foreign exchange contracts selling DM against U.S.-Dollars would be arranged to cover the U.S.-Dollar denominated debt's interest and principal payments.
- Currency Swaps/Parallel Loans/Back-To-Back Loans
  Currency Swaps, parallel loans and back-to-back loans employ similar techniques in order to achieve the same objective. They differ mainly with respect to balance sheet treatment, taxation of interest income and interest expense vs interest differential fee, and with respect to the implied right of offset.

  A currency swap involves two parties in different

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countries selling their respective currencies to each other on day one (the initial exchange) with an agreement to reverse this sale with identical principal amounts at a specified future date (the re-exchange) by means of a forward foreign exchange contract. The premium, or discount, incorporated in a long-dated forward contract which is normally reflected in the forward rate is here replaced by an annual fee, calculated on the basis of nominal interest rates to reflect the relative level of medium- and long-term interest rates in the currencies involved. Due to the structure of an initial exchange and a final re-exchange, it is the interest rate differential that is the basis for computation of the annual fee. This differential is calculated as interest on the higher-rate currency minus interest on the lower-rate currency calculated at the exchange rate for the sale of the higher-rate currency for the value date of the annual fee payment.

Conclusion

The German financial markets are well-developed and provide the subsidiary of a U.S. corporation with a great variety of instruments for funding and investing. Liberalization has been continued in recent years to allow for Germany's effective integration into the globalizing financial markets.

But the challenge continues: the absence of a futures and options market in Germany is a serious drawback for Frankfurt's further development into a major international center. Investors who manage their funds on a global scale expect national markets to provide them with the hedging instruments and the liquidity which allow them to incur the risks inherent in committing themselves in size to one market or another. In this respect, the recent initiatives for the establishment of a German Options and Financial Futures Exchange (GOFFEX) must not only be welcomed but given every possible support for realization as soon as prudently possible.

The intended introduction of a 10% withholding tax on DM debt obligations as part and parcel of the Government's Tax Reform Proposal, together with the resounding silence on its pre-election pledges to abolish the Stock Exchange Turnover Tax, thoroughly disturbed the markets and those participants who are working to make Frankfurt a truly international financial center. These taxes represent de facto subsidies to offshore financial centers for the trading of German bonds. The continuation of the Boersenumsatzsteuer and the imposition of the withholding tax do nothing to support the Bundesbank's wish to have all DM securities activities conducted on German exchanges. The hope remains that the detailed regulations of the withholding tax which are still being worked out, and a renewed effort to abolish the Boersanumsatzsteuer, will take the implications of these measures for the international role of the German stock exchanges into account. ■

...the establishment of a German Options and Financial Futures Exchange (GOFFEX) must not only be welcomed but given every possible support for realization as soon as prudently possible.

ZUSAMMENFASSUNG

Finanzierungsalternativen fuer US-Firmen in der Bundesrepublik

Bei der Finanzierung ihrer Ueberseeaktivitaeten moechten die multinationalen US–Unternehmen den effektivsten Nutzen aus ihren Weltbilanzen ziehen. Im Bestreben nach Optimierung der Mischung aller weltweit erhaeltlichen Finanzierungsfaelligkeiten, Arbitragepolitik, Waehrungspositionen, Steuerpolitik, Liquiditaetsfragen entscheidet, dabei ein gutes Management-Informationsystem, das alles zusammenfasst. Unter solchen Voraussetzungen koennen die ueberseeischen Tochtergesellschaften unter vollstaendiger Ausnuetzung aller Finanzierungsalternativen, die das Banken—und Wertpapiersystem des Gastgeberlandes anbietet, effizient in das allgemeine Finanzierungsmanagement der Muttergesellschaft integriert werden.

US-Unternehmen betaetigen sich in verschiedenster Art auf dem deutschen Markt. Durch Verkaufs-und Verteilungsnetze, durch Tochtergesellschaften mit eigenen Produktionseinheiten und durch den Erwerb von einheimischen deutschen Grosshandelsunternehen. Das gesamte US-Investment in der Bundesrepublik Deutschland belief sich am Jahresende 1986 auf beinahe DM 45 Milliarden. Es erzeugte einen Strom von Ertraegen im Umfang von mehr als DM 3 Milliarden.

Die deutschen Finanzmaerkte sind gut entwickelt und bieten den US–Tochtergesellschaften eine grosse Auswahl an Instrumenten der Finanzierung und der Investition. Die Liberalisierung wurde in den letzten Jahren fortgesetzt, um eine Integration Deutschlands in die weltweiten Finanzmaerkte zu erreichen. ❑

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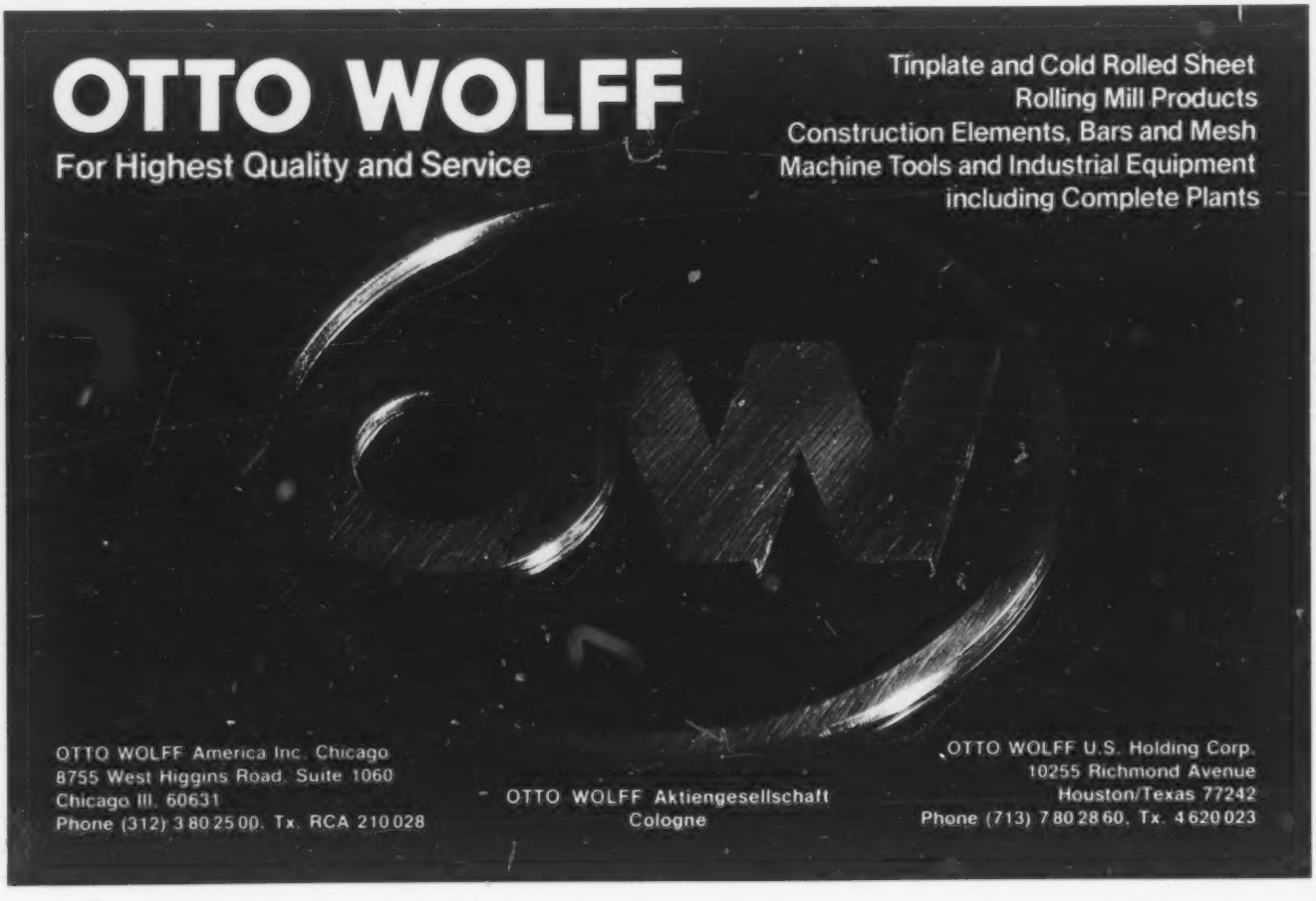

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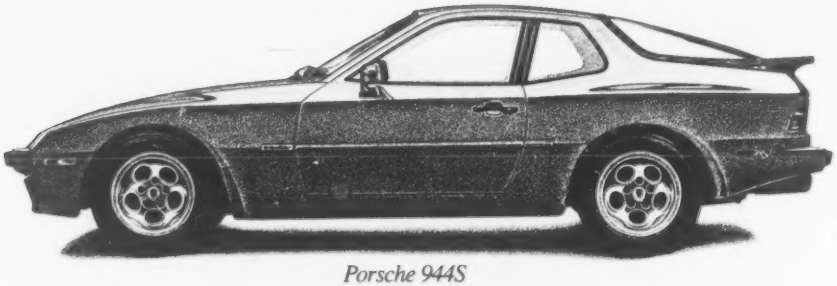

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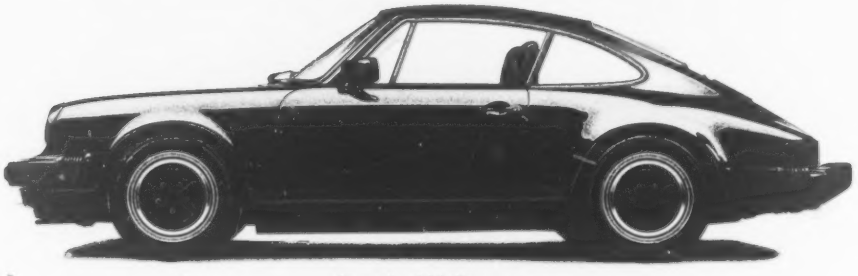

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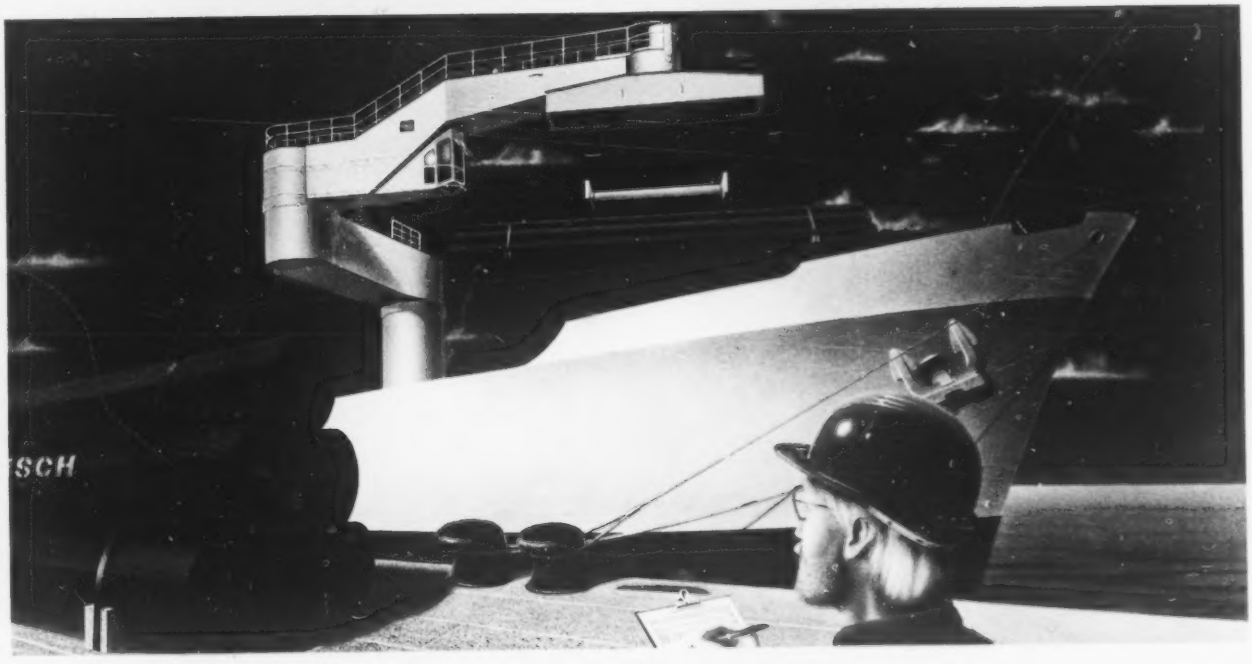

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Einige Anmerkungen zum Zustand der transatlantischen Beziehungen

Challenges and Opportunities for the Trans-Atlantic Relationship

Edzard Reuter
Chairman
Daimler-Benz AG

As a young man I witnessed at very close quarters the struggle of the people of Berlin for the freedom of their city. The Russian blockade would never have been overcome without the generous support of the United States. Today there would be no free Berlin and it is most unlikely that the Federal Republic of Germany would be counted among the democracies of this world.

1987 is a year for many different memories. No person, of whatever country, who views democracy as the only conceivable political system for a community of free individuals, can be unmoved by the 200th anniversary of the American Constitution. A hundred years before that, three hundred years ago, the first German settlers arrived in the New World, which for them represented the stronghold of economic hope, religious tolerance and political freedom.

The undiminished vitality of this spirit of enlightenment and reason was once again demonstrated to the Europeans when your Secretary of State, Mr. George Marshall, proposed his far-sighted plan forty years ago, which provided the essential foundations for the safety and stability of European democracies. This has not been forgotten. There are only a very few episodes in history where victorious nations have acted so magnanimously towards a regime which had brought untold suffering to so many people.

I do not express this sentiment at the beginning of this article simply as a cheap way of gaining sympathy. An American poster for the 300th anniversary of the first German immigrants displays a black, red and gold slice of a cake in the colors of the Stars and Stripes. Every now and

No person...can be unmoved by the 200th anniversary of the American Constitution.

then we should stop for a moment in the hustle and bustle of everyday life and think about the slogan "a slice of American life has a German filling".

For me at least, this is a truth which has a much stronger foundation than all the problems and conflicts which currently face trans-Atlantic and German-American relations. Only if we understand this can we appreciate the idea that the history of the Western alliance has always been at the same time the history of its crises.

Foreign Policy and Economics

In a world of enormous political and economic complexity, common objectives will never arise of their own accord, just automatically. If nothing else, the geopolitical positions of the U.S. and Western Europe differ too greatly for that.

This becomes quite evident if we look at the recent progress made concerning the East-West divide in Europe, which was considered insurmountable only a short time ago. Nobody can yet judge where it will end. And there is a whole series of further challenges which equally call for

The "border" that separates the two Germanies.

joint action. Here I am thinking of the worldwide economic and financial problems, environmental pollution, and the expansion in communications that is turning our planet into one big village.

We know from bitter experience that co-operation between East and West will only thrive if each side can rely on the security arising from balanced military positions. Against this background, all the governments of Western Europe would find themselves in conflict with their electorate if they were not seen to make determined efforts to take the change in Soviet policy seriously.

It is precisely this combination of domestic reform and foreign policy flexibility in the U.S.S.R. which gives many people hope for a lasting change in East-West relations. Yet we are all fully aware that the outcome of this experiment is far from certain. This makes it all the more important for us to pursue friendly relations in the Western alliance seriously and prudently, even when this sometimes seems too irksome a task. Thus we are constantly being challenged to find a common path for the ideals of the U.S. and Europeans. For we are no dreamers.

We know from bitter experience that co-operation between East and West will only thrive if each side can rely on the security arising from balanced military positions.

In the past there were many people on our side of the Atlantic who were concerned about the inner justification of the defense alliance if we did not finally see an end to the arms race on both sides. The double-zero option being prepared in Geneva is now almost in the realm of the routine. Many people are pinning their hopes on further disarmament agreements. This may well lead us Europeans, and with us the whole of NATO, to develop new concepts of joint conventional defense before we can regard further steps in the area of nuclear disarmament as contributing to our own security. France and Germany will no doubt have a particularly important role to play in this context.

However, I am sure everyone will agree that there are other far greater risks to the future development of trans-Atlantic relations than those caused by military strategies.

Despite the genuine efforts of General Secretary Gorbachev, the fact remains that the dictatorships in the East with which we still have to deal need pay only scant regard to their own domestic economy when planning foreign policy. This is not the case in our countries. In Europe in particular there are many examples of how quickly a reasonable foreign policy can falter if the people suffer economically. Of course I am well aware that the most recent examples of this occurred over forty years ago, and that history does not look as if it will repeat itself. But it should be a warning to us anyway.

...there are other far greater risks to the future development of transatlantic relations than those caused by military strategies.

Assessing the Economic Traps

It is probably still too early to predict with any certainty what effect the events of Monday, October 19, 1987 will have on our economic relations. Nevertheless, I think it is important to notice that those people who claimed that a repeat of 1929 and its consequences was out of the question no longer sound quite so firmly convinced.

In Europe, at any rate, there is a growing feeling that a serious economic crisis could develop, if the necessary parameters for joint action are not established early enough. This sort of crisis in the world economy could have an explosive effect on the East-West conflict, involving incalculable dangers which could jeopardize the cohesion of the Atlantic Alliance.

It is probably still too early to predict what effect the market crash in October will have on our economic relations.

It is not enough simply to be aware of this danger. This awareness must be combined with the courage to analyze rationally and the strength to make political decisions. In other words, we are faced with a situation in which the lack of economic policy-making competence and leadership demonstrated over the past few years by the West has turned into a direct political danger.

Clearly there is no miracle cure which will eliminate our current economic problems overnight or even over a few months. One wrong word from a politician or an inappropriate step by a central bank will suffice to trigger the revenge of a market which moves a flood of 200 billion dollars every day on the international foreign exchange markets.

This means that the time for complaining, trivializing problems and blaming one another is over. We must say goodbye once and for all to those dogmas which have been worshipped like idols in Tokyo, Bonn and Washington and prevent us from building durable dams to resist the floods. Of course it was correct to take the decisive step to break the inflation of the Seventies which caused so many serious problems, and to accept the serious crisis of adaptation which followed. This demanded radical measures, which had the sort of success that nobody had dared hope for. But the rule of economic activity is change. What was wrong yesterday might be the right approach today.

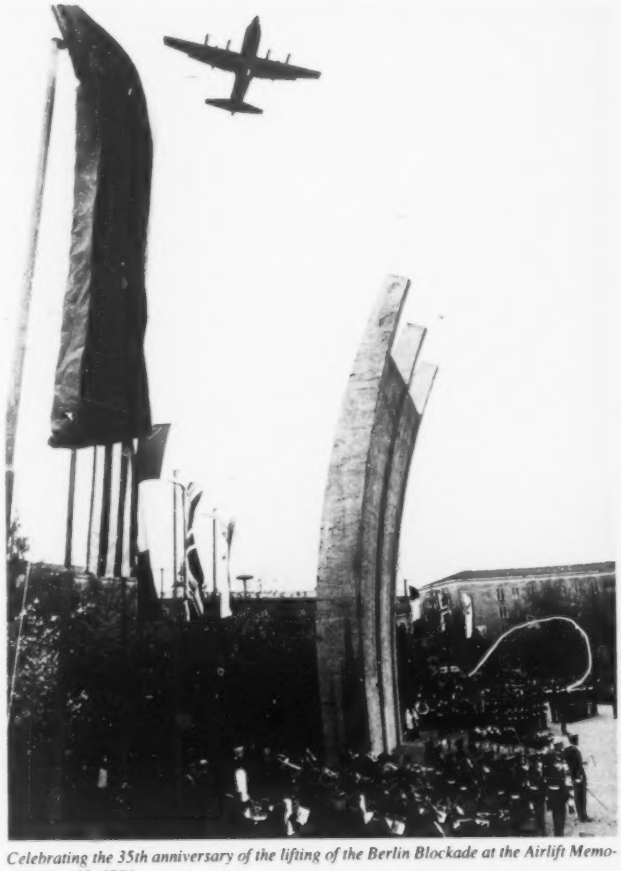
Rather than considering this question with objective and political competence and establishing ways to act together, we still restrict ourselves to being quite sure of what everyone else should do. Meanwhile we ourselves remain the paragons of virtue we have always been.

All the European governments, and the Japanese government too, are quite convinced that America is the villain of the piece. They say that in the U.S. an illusory economic boom has been financed for years by excessive deficit spending. The resulting huge budget deficit with its consequences for international interest structures and the money markets are regarded as the root of all economic evil.

...it is important to notice that those people who claimed that a repeat of 1929 and its consequences was out of the question no longer sound quite so firmly convinced.

Those people who defend the American stance take an equally simplistic line. For them, the creation of new jobs, the technological innovative power of the American economy, and qualifying the deficit by highlighting the level of the U.S. gross national product, are reason enough to maintain that the American economy is healthy and to request that those tiresome prophets of doom from other continents hold their tongues.

And by the same token, these American protagonists are quite certain that those countries which are really to blame are Japan and Europe, not least the Federal Republic of Germany. They claim that, having come to grips with inflation, these countries now want to eradicate it for evermore, while in reality their policies will provoke worldwide deflation. Rather than advancing courageously towards deregulation, the Europeans, according to this argument, adopt a wait-and-see attitude, while subsidizing the Airbus and fighting American agricultural imports tooth and nail.



Celebrating the 35th anniversary of the lifting of the Berlin Blockade at the Airlift Memorial, May 12, 1984.

Those people who defend the German government's economic policies are accustomed to point out the bold growth stimulus, based on a responsible approach, which they say will result from a so-called tax reform planned at some stage over the next few years. And they add in the same breath that American agricultural subsidies are naturally far more harmful than those of European countries.

The lines of argument used where our Japanese friends are concerned are much the same. But I shall not dwell on the matter, especially since, in view of the political background which affects us all, the arguments used are equally ridiculous. So what is to be done.

Facing Up to the Answers

I believe that we have been aware of the answers for a long time.

Obviously, the U.S. budget deficit and the closely-related balance-of-trade deficit are two major causes of the current upheaval in the world economy. It is essential that concrete steps are taken to eliminate this turmoil. Everyone knows too that the United States, more than any other country, is vital enough to succeed rapidly with this very difficult task. Nevertheless, it would be erroneous to believe that these problems can be solved altogether by rapid, radical action.

In fact, I am convinced that this would be quite the wrong approach.

An excessive cut in American spending combined with a major increase in taxes would carry the risk of a worldwide recession, and a dangerous increase in developing country debts. Despite all the upheavals, the American national economy is still the dominant economy for the West and the least-developed countries.

Counteracting the American balance-of-trade deficit by radical means is also out of the question. I know that some people are very tempted by a ruthless policy of further devaluing the dollar. If this were to be implemented, it would have cataclysmic consequences for the world economy.

There are many reasons for this. One is that many American companies still need to develop the capacity to hold their own in export markets with their products and their marketing skills. I do not mean this as a reproach—on the contrary, it is hardly surprising that this should be the case, since a large, active home market such as that of the U.S. naturally tends to dull the incentive to export. In Europe, with its small economic areas, things have always been different. The result is that there are countless small and medium-sized businesses in Europe, which have over the past decades geared themselves to exporting.

And in the Federal Republic of Germany there was something more. The motto "exportare necesse est" was an important way of regaining international independence and respect after the ignominy of Hitler's atrocities. The same applies incidentally to Japan.

Therefore we have adapted ourselves to the specific requirements of other countries, with our products, the related services and, of course, the language we use. We have learned to safeguard ourselves against market and currency fluctuations by producing high-quality goods. Our well-trained specialists, from blue-collar workers to managers, are our most important asset here—the state and individual companies invest a great deal in their qualifications.

Bremerhaven: automobiles ready for shipment abroad.

Overseas Center at the Port of Hamburg: West Germany is the world's major exporter in terms of value.

At the same time, we have learned to take into account the needs of those national economies to which we export. The company for which I have the honor to work sold $3.8 billion worth of goods to the U.S. in 1986, while at the same time providing employment for more than 50,000 Americans with Daimler-Benz production plants and purchases.

Another trade-motivated manipulation of the rate of exchange would only serve to jeopardize this growing interaction between Western economies. I fear that we have already gone far too far down this road, and I can only urge us all to beware of the heedless attitude of those people who believe that it is the ideal solution to all our problems.

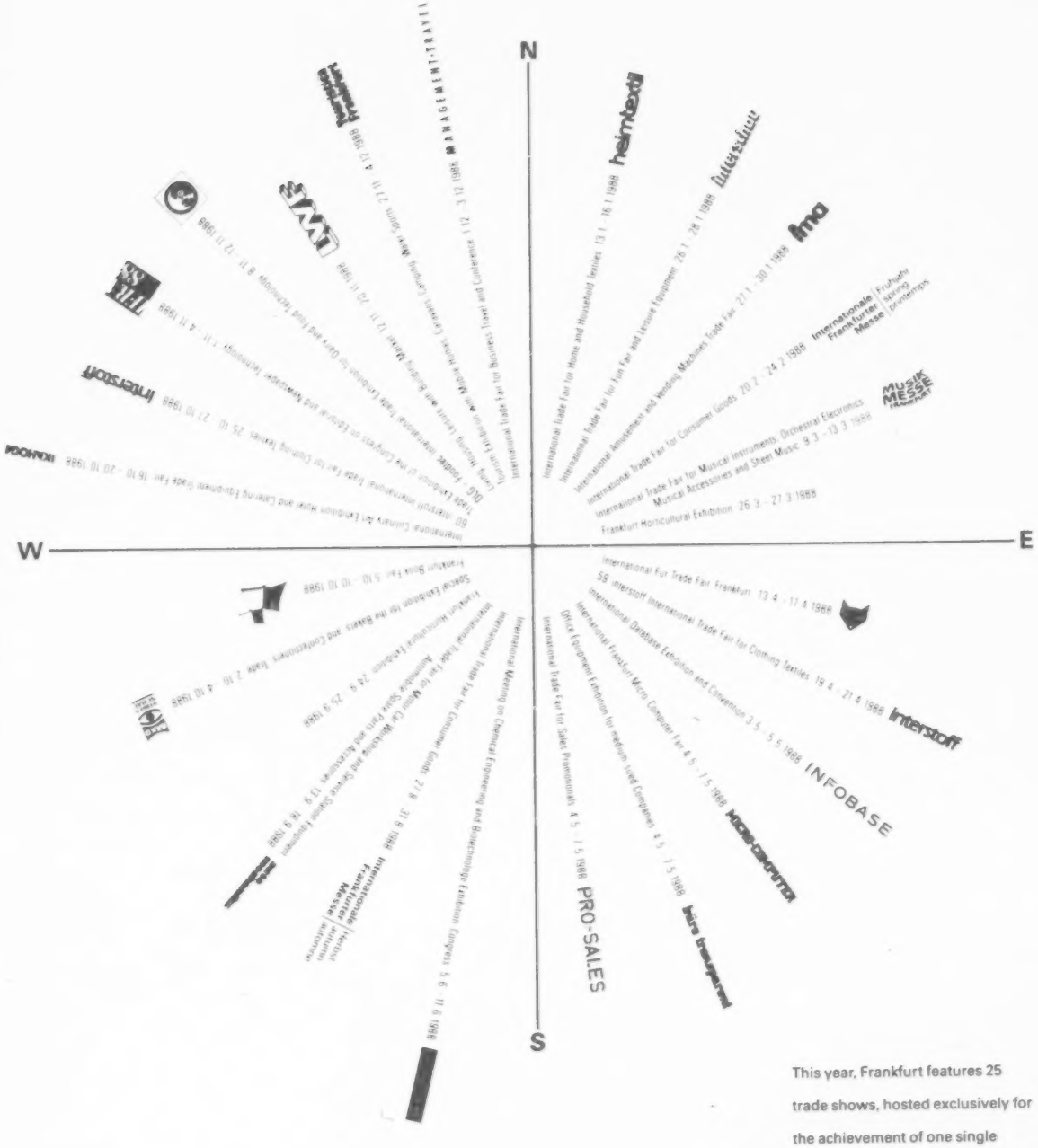
Obviously, the U.S. budget deficit and the closely related balance of trade deficit are two major causes of the current upheaval in the world economy.

The same applies to the policy of protectionism, which can only generate losers. I am fully in agreement with Richard Burt, the American ambassador to my country, when he proposes a comprehensive international agreement aimed at eliminating agricultural subsidies in Europe and the United States over a defined period of time.

If Europeans feel they can expect active responsible measures from the American government to reduce the budget deficit, then our American friends are equally justified in demanding that European governments, and particularly that of the Federal Republic of Germany, should at last abandon their over anxious economic deflationary strategies. I believe it is absolutely essential for Western governments to agree on a new growth concept for the world economy as soon as possible, if the current economic crisis is not to turn into the sort of political crisis which I outlined at the beginning.

Solving the problem of the least-developed countries'

Spring, Summer, Autumn and Winter.



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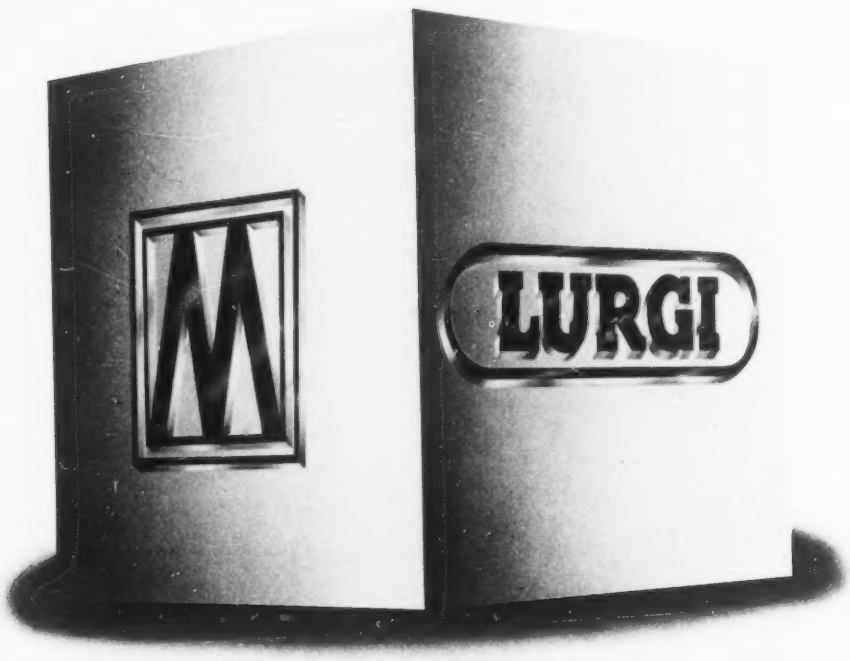

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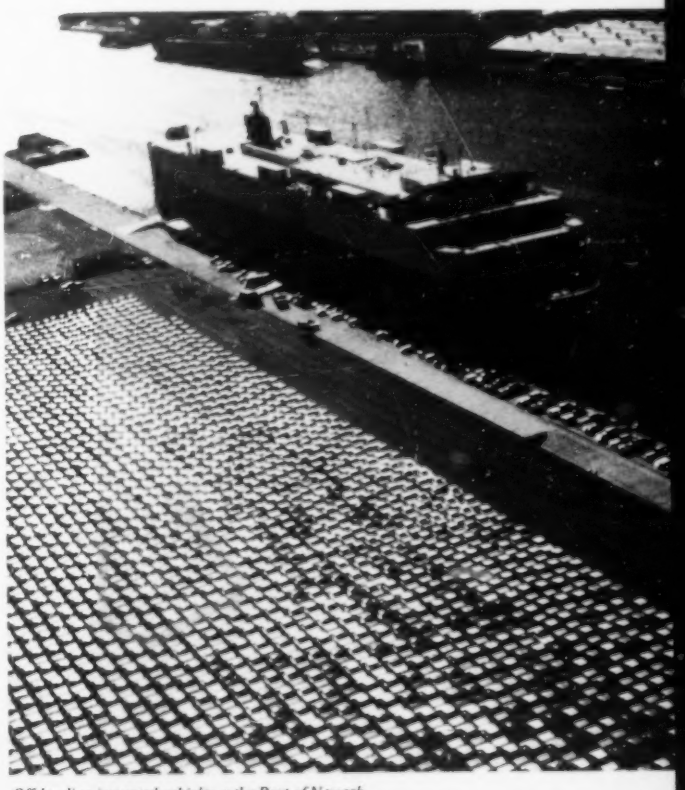
debts must be part of this growth concept. Here I wholeheartedly agree with Alfred Herrhausen who put forward the idea that creditor countries should partially waive repayment of these debts, and convert them generously. It is easy to criticize proposals such as these, but we shall soon all find ourselves in much greater difficulties if we lack the courage to pursue unconventional solutions.

I fear that our problems are long past the stage of being solved by cryptic signals or shrill slogans. Summit conferences played out in front of television cameras are certainly not enough. The crux of the matter is the factual, political content of a concept which links day-to-day crisis management with convincing long-term perspectives.

I believe it is absolutely essential for Western governments to agree on a new growth concept for the world economy as soon as possible.

All these steps need time. They will only succeed if we are at last able to counter the catastrophic lack of economic policy-making competence in our governments. For we now have to choose between this sort of concerted leadership and a free-for-all.

At the same time, we choose between going down in history as failing to meet an exceptionally tough challenge or as accepting this challenge with courage and openness. Let us hope that we will very soon opt for the alternative, before it is too late. ■



Off-loading imported vehicles a the Port of Newark.

ZUSSAMMENFASSUNG

Einige Anmerkungen zum Zustand der transatlantischen Beziehungen

Die Geschichte der westlichen Allianz war immer eine Geschichte von Krisen. In einer Welt mit gewaltiger politischer und wirtschaftlicher Komplexitaet entstehen gemeinsame Ziele nicht aus eigenem Antrieb. Selbst wenn sonst nichts waere, so wuerden dazu jedenfalls die geopolitischen Positionen der USA und Westeuropas zu stark differieren.

Wir wissen aus bitterer Erfahrung, dass Kooperation zwischen West und Ost nur gedeihen kann, wenn jede Seite auf die Sicherheit ausgeglichener militaerischer Positionen bauen kann. Vor diesem Hintergrund wuerden sich alle Regierungen Westeuropas mit ihrer Waehlerschaft in Konflikt setzen, wenn sie nicht entschlossene Anstrengungen machen den Wechsel in der sowjetischen Politik ernst zu nehmen.

Eine wundersame Heilung, die unsere derzeitigen wirtschaftlichen Probleme uebernacht oder wenigstens in den naechsten Monaten beseitigt, ist nicht zu erwarten. Die Maerkte sind in einer Verfassung, in der ein falsches Wort zu einer Flut am Devisenmarkt fuehren kann, der jeden Tag $ 200 Mrd. bewegt. Deshalb muss die Zeit fuer Beschwerden, triviale Probleme und gegenseitige Anschuldigungen vorbei sein. Wir muessen uns ein fuer alle mal von allen Dogmen verabschieden, die wir in Bonn, Tokyo und Washington abgoettisch verehrt haben und die davon abhalten dauerhafte Daemme zu errichten, die den Fluten wiederstehen.

Alle europaeischen Regierungen und ebenso die japanische Regierung sind davon ueberzeugt, dass Amerika der Schurke in diesem Stueck ist. Die Leute, die den amerikanischen Standpunkt einnehmen folgen gleichfalls einer simplen Linie. Fuer sie ist die Schaffung neuer Arbeitsplaetze, die innovative Kraft der amerikanischen Wirtschaft und eine Unterbewertung des Defizits durch Vergleich mit dem US-Bruttosozialprodukt, Grund genug die amerikanische Wirtschaft fuer gesund zu erklaeren. Offensichtlich sind das US-Haushaltdefizit und das damit eng verwandte Handelsbilanzdefizit die Hauptursachen fuer die gegenwaertigen Umbrueche in der Weltwirtschaft. Es ist lebensnotwendig, dass konkrete Schritte zur Beendigung dieses Aufruhrs unternommen werden.

Wenn die Europaeer glauben von der amerikanischen Regierung aktive verantwortungsvolle Massnahmen zur Senkung des Haushaltsdefizits fordern zu koennen, dann sind unsere amerikanischen Freunde berechtigt, von den europaeischen und besonders von der deutschen Regierung zumindest die Aufgabe der ueberaengstlichen Antiinflationspolitik zu forden.

Ich befuerchte, dass unsere Probleme bereits lange ueber den Zustand hinaus sind, um durch geheime Zeichen oder laute Toene geloest zu werden. Gipfelkonferezen die vor Fernsehkameras abgehalten werden sind nicht genug. Alle erforderlichen Schritte benoetigen Zeit. Sie werden aber nur erfolgreich sein, wenn es uns gelingt, dem katastrophalen Mangel an wirtschaftpolitischer Kompetenz in unseren Regierungen zu begegnen. Denn wir haben die Wahl zwischen solcher konzertierter Fuehrerschaft oder allgemeinem Entscheidungschaos. ❑

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Oekonomische Konflikte: eine moegliche Achillesferse der atlantischen Allianz

Economic Conflict—The Potential Achilles Heel of the Atlantic Alliance?

Charles McC. Mathias, Jr.
Chairman
American Council on Germany

The United States Congress designated October 6, 1987, the 304th anniversary of the arrival of the first German immigrants in Philadelphia, as German-American Day. President Reagan signed this joint resolution at a White House ceremony on October 2 and urged all Americans "to learn more about the contributions of German immigrants to the life and culture of the United States and to observe this day with appropriate ceremonies and activities." Today one out of every four Americans, approximately 60 million, trace their heritage in whole or in part to German ancestry. There are over 4,000 German-American organizations in the United States which are located in every major city scattered from the Atlantic to the Pacific.

Although three centuries of German contributions to every facet of American life have been profound, the role played by the United States in the post World War II development of the Federal Republic should be remembered —the wisdom of the Marshall Plan, the climate of security offered by the American nuclear umbrella as well as the protective presence of U.S. forces, the Berlin airlift, and the facilitating of Germany's reintegration into the European community of nations. In May 1989, the Federal Republic will celebrate the 40th anniversary of its *Grundgesetz* or Basic Law. The democratic provisions of both the *Grundgesetz* and the U.S. Constitution further serve to illustrate the common bonds between the Federal Republic and the United States.

But all the legacy of the past, as rich and valuable as it is, cannot exempt the German-American relationship from the necessity of a sustained and comprehensive effort to maintain a spirit of cooperation in a world in which it matters more than ever, and in a world in which it is likely to be vulnerable to many hostile forces. The focus must be on the present and future of that relationship.

The Atlantic Alliance: The Critical Link

The official link that ties the United States and the Federal Republic together today is the Atlantic Alliance. After helping to preserve the peace in Europe for almost four decades, the Atlantic Alliance is alive, but some would say, not quite well. Although critics and proponents alike

Today one out of every four Americans, approximately 60 million, trace their heritage in whole or in part to German ancestry.

can point to a multitude of examples to show that the Alliance is or is not working, no one would dispute the fact that the Alliance has undergone a dramatic transformation in the 38 years since the North Atlantic Treaty was signed. Despite its uncertainties, no one has yet offered a viable alternative to the present arrangement. But most would

Chancellor Kohl and Secretary of Defense Weinberger pay a visit to U.S. Forces in West Germany.

concur that continuing evolutionary changes are essential if the Alliance is to fulfill its purpose into the foreseeable future.

The Atlantic Alliance is a voluntary marriage of many different nations and peoples with a common heritage of history and democracy who share many similar values and interests. It is not, however, a perfect blend of interests.

After helping to preserve the peace in Europe for almost four decades, the Atlantic Alliance is alive, but some would say not quite well.

The strength of the Alliance lies in its diversity and flexibility and in the fact that so many individual nations, each with its own agenda and interests, are able to bend and compromise on as many vital issues as they do.

The Alliance has not been without its share of challenges to stability and consensus—recent examples include: arms control, terrorism, East-West relations, glasnost, nuclear issues, and out-of-area matters such as the Persian Gulf. While not wanting to diminish the importance of any of these issues, one of the most potentially divisive issues for the Atlantic Alliance has been steadily gaining momentum —trade and monetary matters.

In framing the original treaty, the NATO allies were ahead of their time in recognizing the potential for economic conflict. Article I of the treaty addressed the urgent problem of military security, but the framers stated in Article II that they would "seek to eliminate conflict in their international economic policies" and would "encourage economic collaboration between any or all of them."

The Globalization of the Economic System

The Western economic system, which depends on competition for market shares between businesses and nations as well, naturally generates friction among the competitors. However, if Article II had been utilized as fully and as successfully in coordinating economic issues as Article I was in coordinating security matters, we might not be where we are today with the European Community (EC) and the United States drifting away from competition in trade and toward conflict in trade. Without presuming that full economic cooperation within the Atlantic Alliance, even if it were achievable, would eliminate all the economic difficulties faced by the United States and the other allies, it would surely help. Lord Carrington, the Secretary General of NATO, has been pointing out this unused potential.

An examination of the state of economic relations in the Atlantic Alliance today as well as trends for the future necessarily requires that special attention be focused on the United States and Germany.

As the stock market chain reaction last October illustrates, the world economy has become truly global in nature. The global economic environment is characterized by extremely complex market interdependence with the result that economic developments are often completely beyond the control of even the major economic powers involved.

An examination of the state of economic relations in the Atlantic Alliance today as well as trends for the future necessarily requires that special attention be focused on the United States and Germany. Through the chance of history, geography, politics and economic power, the Federal Republic finds itself as the very cornerstone of the Alliance in Europe. For many years, the Federal Republic has been the United States' closest ally in Europe. Although that is still the case today, the relationship has matured into a more equal partnership, especially in terms of economic clout. The Federal Republic is proportionally the major exporting nation in the world and is by far the major economic power in Europe.

In past years, the United States was the dominant player in the international economic system and was able to provide the economic locomotive for the Atlantic Alliance. With the emergence of the European Community and Japan as separate economic power centers, this is no longer the case. Since it lacks a common currency base and

full political integration, however, the European Community has been unable to realize its full economic leadership potential.

Since no formal agency or mechanism within the framework of the North Atlantic Treaty was created to handle economic matters, attempts among the member countries to resolve disputes and coordinate policy have taken several routes. As a result, the agencies employed often do not comprehend either the total membership of the Alliance or the boundaries of the problems. The General Agreement on Tariffs and Trade (GATT) was created to manage Western trade relations, and the International Monetary Fund and the World Bank to handle monetary matters. For reasons not the least of which is the complexity of the task, these agencies have met with only partial success.

In recent years, leaders of the seven major Western industrial nations have met annually in an attempt to coordinate economic policies and have achieved only slightly better results than the formal organizations.

...most disputes between the U.S. and the Federal Republic have been handled bilaterally, recognizing that disputes and tensions between trading partners in a free and open system are the norm.

Although they are sometimes handled on a multilateral basis with the EC, most disputes between the U.S. and the Federal Republic have been handled bilaterally, recognizing that disputes and tensions between trading partners in a free and open system are the norm. The problem lies in the fact that in recent months the decibel level and intensity of voices on both sides of the Atlantic protesting trade and monetary policies seem to be rising.

Combating Protectionism

The reality that there are fundamental imbalances in the world economy today gives rise to increasing levels of concern over what once could be called normal frictions between partners. The sizable U.S. trade deficit offers a graphic example of those imbalances. Regardless of the many theories offered for the causes and solutions to the U.S. trade deficit, it is generally accepted that it developed through a combination of factors over a long period of time and that it will take a multifaceted effort and much time to rectify it.

A sense of urgency has been added to the search for a solution to this problem by the protectionist-leaning trade legislation pending in the U.S. Congress as this article is being written, especially when coupled with the October fluctuation in the international financial markets. Whether or not the trade bill becomes law will depend on its passage through threatening rocks and shoals:

- President Reagan has vowed to veto the trade bill unless certain provisions, particularly the more protectionist ones, are removed or modified. It may prove increasingly difficult for the Democrats to produce enough votes to override a Presidential veto.
- Even though both the House and the Senate versions of the trade bill each passed by sizable margins, many Members of Congress, Democrats as well as Republicans, are opposed to many of the protectionist provisions in the current bills and are concerned about possible retaliatory action by our trading partners.
- After the unprecedented turbulence in the international stock markets and monetary systems last Fall, some Members of Congress as well as the Administration may be reluctant to approve a trade bill with protectionist leanings because of the parallel that might be drawn between the current bill and the depression that followed the passage of the Smoot-Hawley Tariff Act in 1930 after the market crash of 1929.

The European Common Market was created by the Treaty of Rome on March 25, 1957.

...many Members of Congress, Democrats as well as Republicans,...are concerned about possible retaliatory action by our trading partners.

Even though the outcome of the U.S. trade bill is uncertain at the time of this writing, it is still appropriate to examine some of the origins and implications of the bill because the underlying issues are not going to go away anytime soon, regardless of the fate of the current bill. Protectionist pressures on Members of Congress, fueled by the cries of special interest groups who produce goods for export that are unable to compete in foreign markets or who produce goods for domestic consumption that are swamped by imports, have been building up for several years. Members of Congress have also become frustrated with the slow pace or lack of progress in the GATT talks to resolve disputes or unfair practices. Democrats appear determined to make trade an issue for the U.S. elections in 1988. I am in general agreement with President Reagan's commitment to free trade and on holding the line against protectionism. This issue may be with us for a long time if the next President is not as successful in blocking protectionist legislation.

Although one of the presumed causes of the U.S. trade deficit, the overvalued dollar, has been remedied, the international economic system is so complex and interrelated that a correction in one area could easily result in a bigger problem or lack of progress in another area. Other generally accepted factors which contributed to the trade deficit are: the accelerated growth rate of the U.S. economy; unfair trade practices followed by some U.S. trading partners; the impact of the Third World debt crisis on the global economy; and finally, the common American perception that many foreign products possess a qualitative advantage over comparable American products. This is not to say that the U.S. is without blame and does not have any barriers to trade or does not on occasion follow protectionist practices.

...the international economic system is so complex and interrelated that a correction in one area could easily result in a bigger problem or lack of progress in another area.

In the global economic game, there is ample blame to cover each and every player. In a speech given last October, West German President Richard von Weizsaecker criticized the United States for "living beyond its means"—the monumental Federal budget deficit and resulting debt is the supreme example. The U.S. has also been criticized for failing to encourage an adequate savings rate by households and businesses as well as government and for failing to fully consider the impact of its economic decisions on its allies and the global economic system. The enactment of protectionist trade legislation would fit this description.

U.S. officials have criticized the Federal Republic for having an obsessive fear of inflation and for not expanding its economy to keep pace with its responsibilities as a global economic power. President von Weizsaecker, although stating that the European countries did not have the capacity to become "a real global locomotive" for growth, said that if the U.S. were able to achieve a serious reduction of the budget deficit. "a suitable and sensible growth policy on the part of the Europeans will be absolutely necessary." This growth will be essential in efforts to balance the world trade system. According to a U.S. State Department report, in 1985, the U.S. imported more that two-thirds of the manufactured goods exported by the developing countries. The European Community imported only 25% and Japan less than 20%.

There is enough Far East worry to cover Asia as well as Japan. Although the proud possessors of the second largest economy in the free world, the Japanese have been reluctant to play a role in the world economic system commensurate with their power. They have been hesitant to expand their economy and it has been particularly difficult for foreigners to penetrate the Japanese markets.

Keeping the System Free and Open

I do not want to leave the impression that if we get a modified trade bill in late 1987 or early 1988 it will be a disaster for German-American relations. There are many parts of the bill that even the President would approve, such as extending his authority to negotiate trade agreements. However, I am not yet convinced that anyone fully comprehends the influence of all the market forces on the global economic environment. Great care must be taken jointly by the Congress and the Administration in fashioning a final bill that will address the shortcomings in existing laws while looking outside our borders and into the future to assess the total impact of any action taken.

I do not want to leave the impression that if we get a modified trade bill in late 1987 or early 1988 it will be a disaster for German-American relations.

The United States and the Federal Republic together with Japan, as the key economies in the free world, must work in harmony to set the example for the rest of the world in maintaining a free and open monetary and trading system. A successfully ratified Canada-U.S. Free Trade Agreement (it is scheduled to be considered in the U.S. Congress and in the Canadian Parliament in early 1988) would go a long way toward sending the right signal for more agreements in the future.

1988 promises to be a difficult year for the Atlantic Alliance as well as the rest of the world in the area of international trade and monetary policy. We shall have enough friction in the traditional areas with the Alliance—such as developing a credible conventional deterrent capability in Europe—as we approach the 1990's. We do not need to add full-scale trade and monetary disputes to the list.

Bundesbank President, Karl Otto Poehl, in a speech to the American Council on Germany shortly after the stock market crash last October, said the "there is no alternative to policy makers cooperating closely at a time when mar-

A session of the European Parliament in Strasbourg, an effort to create political as well as economic integration in Europe.

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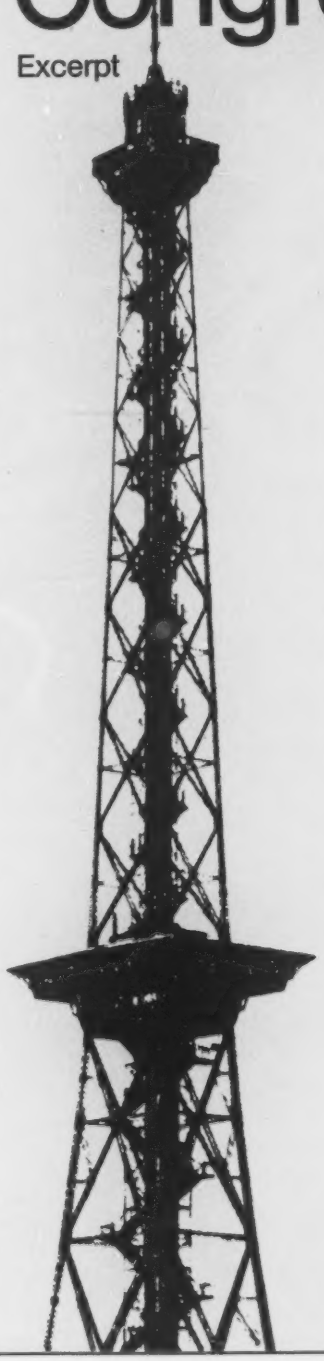

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25.01.–30.01.	**XVth International Agricultural Film and TV-Film Competition 1988**
05.03.–10.03.	**International Tourism Exchange ITB Berlin 1988**
10.04.–08.05.	**18th FBK Free Berlin Art Exhibition 1988***
23.04.–24.05.	**New Businesses Meeting Berlin '88** Forum with Seminars and Exhibition
18.05.–20.05.	**ShowTech '88 Berlin** International Trade Fair and Congress Entertainment Technology, Stage Engineering, Equipment, Management
24.05.–28.05.	**Medical Congress Berlin 1988*** in conjunction with Pharmaceutical and Medico-Technical Exhibition
24.07.–30.07.	**The XIII International Congress of Classical Archaeology***
31.07.–05.08	**24th International Conference on Social Welfare***
26.08.–30.08.	**InduTech '88 Berlin** Exhibition for the Investment Goods Market
31.08.–03.09.	**26th Overseas Import Fair „Partners for Progress" Berlin** Test Sales Section: 31.08.–04.09.
05.09.–10.09.	**International Road and Traffic Conference** "Road and Traffic 2000"*
27.09.–30.09.	**International Monetary Fund/The World Bank and Affiliates 1988** Annual Meetings Berlin (West)*
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1988 promises to be a difficult year for the Atlantic Alliance as well as the rest of the world in the area of international trade and monetary policy.

kets are so highly integrated and shock waves cannot be restricted to one country." In an earlier comment, former Chancellor Helmut Schmidt states that "painful concessions on both sides of the Atlantic are required in order to prevent economic friction from undermining the fundamentals of Alliance cooperation and unity." Will economic conflict become the Achilles heel of the Atlantic Alliance? The answer depends on the wisdom, courage and cooperation of policymakers on both side of the Atlantic. ■

The Headquarters of the European Commission in Brussels.

ZUSAMMENFASSUNG

Oekonomische Konflikte: eine moegliche Achillesferse der atlantischen Allianz

Obwohl drei Jahrhunderte deutscher Mitwirkung in jedem Bereich des amerikanischen Lebens tiefgreifend waren, sollte die Rolle gewuerdigt werden, die die Vereinigten Staaten fuer die Entwicklung der Bundesrepublik nach dem zweiten Weltkrieg gespielt haben. Die Foerderung durch den Marshall-Plan, die Sicherheit unter dem nuklearen Schirm ebenso wie die Praesenz der U.S. Truppen, die Berliner Luftbruecke und die Erleichterung der Reintegration in die Gemeinschaft der europaeischen Voelker.

Aber das ganze Vermaechtnis der Vergangenheit, so reich und wertvoll es sein mag, entbindet die Deutsch-Amerikanischen Beziehungen nicht von dem Erfordernis einer stuetzenden und umfassenden Anstrengung um einen Geist der Zusammenarbeit aufrecht zu halten, in einer Welt, in der diese wichtiger denn je ist und in der man leicht verwundbar ist gegenueber den vielen feindlichen Kraeften.

Eine Untersuchung des Zustandes der wirtschaftlichen Beziehungen in der atlantischen Allianz fordert—heute genauso wie fuer zukuenftige Entwicklungen—notwendigerweise ein besonderes Augenmerk fuer die Vereinigten Staaten und Deutschland. Wenn auch die Streitigkeiten zuweilen auf multilateraler Ebene behandelt werden, so werden doch die meisten Probleme bilateral eroertert, eingedenk der Tatsache, dass Streit und Meinungsverschiedenheiten zwischen Handelspartnern in freien Systemen normal sind.

Die Realitaet der fundamentalen Ungleichgewichte in der Weltwirtschaft gibt Anlass zu erhoehter Sorge ueber das, was einmal "normale Reibung" zwischen Partern genannt werden koennte. Obwohl eine der vermutlichen Ursachen des U.S.-Handelsbilanzdefizits—der ueberbewertete Dollar—nicht mehr besteht, ist das internationale Wirtschaftssystem so komplex und verknuepft, dass die Korrektur eines Bereiches leicht noch groessere Probleme in einem anderen hervorruft oder dort den Fortschritt hindert.

1988 verspricht ein schwieriges Jahr fuer die atlantische Allianz zu werden, genauso wie fuer den Rest der Welt im internationalen Handel und der Finanzpolitik. Wir werden genug Reibung in den traditionellen Bereichen der Allianz haben—wie bei der glaubwuerdigen konventionellen Abschreckung in Europa, die wir fuer die 90er Jahre erwarten. Wir muessen nicht noch die ganzen Handels- und Finanzfragen hinzufuegen. ❑

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Economic Growth and Social Policy in Europe and America

Professor Ralf Dahrendorf

I have chosen to make a few remarks about the subject of economic growth and social policy in Europe and America. It is a subject of major interest and major importance on both sides of the Atlantic, and a subject which has certainly occupied my own time while I was here during the last year in New York. There are, as I see it, two main issues in contemporary politics. One is, how do we stimulate the possible sustained economic growth? The other is, how do we make sure that there is a fair distribution of the fruit of such economic growth? I want to reflect on the relationship between these two issues for a moment. I want to reflect on this relationship in the light of my own experiences in Europe and the United States.

There are some who believe that there is no conflict between these two issues. Indeed, there are many who believe, or seem to believe, that if you solve one the other will no longer arise. It was my strong impression in following the election campaign in Britain, that Mrs. Thatcher is convinced that, if only she can keep the growth machine working in Britain, over time the much discussed North-South-divide will be bridged and even the much-discussed inner-city problems will be solved, with economic growth ultimately sweeping up these social issues and enabling people to take part in the rising prosperity of the whole. At the same time, the British Labor Party continues to believe

There are undoubtedly people who believe that by stimulating growth the social problem can be solved.

that it can tackle the problems of social differences, of regional differences, by redistribution without by the same token harming the process of economic growth. In other words: the two extremes in the British campaign both believed that either by stimulating economic growth or by conducting a social policy of redistribution you could deal with all contemporary issues.

In Germany you probably find milder versions of these two views, but both these views are nevertheless present and are at least implicitly a part of the non-existent political debate. There are undoubtedly people who believe that by stimulating growth the social problem can be solved, as there are people who believe that by redistribution the economy is not particularly harmed. At least at the last presidential election similar differences could be observed in the United States.

Economic Cultures and Unemployment

In fact, I shall argue that there are contradictions between the two objectives of contemporary policy. One of the main obstacles to sustained growth consists in the rigidities which have been created by decades of social policy. As you will notice, this is not a statement which is

Foreign workers on an Opel assembly line: they enjoy the same rights and benefits as their German counterparts.

meant to undo the achievements of social policy. It is intended to be a statement of fact, a statement not of preference, but of actual developments. Labor cost and notably non-wage labor cost has undoubtedly contributed significantly to difficulties in the way of growth. The bureaucratization of society which resulted from decades of social policy development, both in Europe and the United States, has contributed to making innovation less likely, and to making entrepreneurial activity more difficult. In that sense there is a direct relationship between slow or difficult growth and recent developments in social policy.

On the other hand it is one of the striking discoveries of recent years and notably of the years since the resurgence of economic growth in the early 1980s that growth leaves some behind. Growth does not seem to coincide automatically with some of the social issues which arise in our society. Productivity increases can mean two things: they can mean that the same number of employed people actually produce more, but they can also mean that the same net output is produced by fewer people.

More and more often in recent years one has the impression that the actual productivity increases are due to the same being achieved by fewer people rather than by the same people producing more. It is more true in Britain than in the United States, but true also to some extent in Germany that significant growth is due to or at any rate accompanied by persistent long-term unemployment.

The picture in the United States is perhaps slightly different. I shall return to it later because I want to confront the two parts of the world and I want to argue that the differences between them are likely to be with us for a long time to come.

Last year I had the pleasure of chairing an OECD group which was concerned with labor market flexibility. It was a small group, but it had members from the United States and Japan, from Australia and Sweden, from France and myself in the chair. Perhaps the most impressive result of the deliberations of this group—for me at any rate, and I hope it tells in the report we produced—is the extraordinary difference in economic and industrial culture in these different parts of the world. The argument which we try to present is that these differences are a part of reality which we had better accept as such, so that we had better not try to impose just one view of where things are going, or should be going, on everybody all over the world.

There are the large Japanese firms and the fact that they are in trouble now is one of the worrying aspects of the international economic situation—with a lot of hidden unemployment, that is, people who at any one time are in the shunting-yard as it were, being moved from one job to another, but not really employed. There are of course also all those retired people who start their own small businesses and have them related to the large firms.

The result is low unemployment figures, but a high social cost. The result is low mobility, but nevertheless very considerable flexibility of industrial development. This is flexibility in a very un-American way, not by individual decisions to move, by a downward flexibility of real wages, but by a system which in moving people from one place to another is adaptable, can adjust to new circumstances. This system cannot easily be translated, and perhaps not be translated at all, to other parts of the world.

More and more often in recent years one has the impression that the actual productivity increases are due to the same being achieved by fewer people rather than by the same people producing more.

Then there is the European tradition of immobility coupled with the welfare state. In Europe there are high guarantees of status for large numbers of people, coupled with the corporation of personal relations between organized labor, government and employers' organizations, that is, with a system of decision-making which is more open than the Japanese system but also emphasizes organizations rather than individuals. Thirdly, of course, there is the American system, of traditional individualism, of adjustment and adaptability by individual decisions in the market place.

Workers in declining industries, such as coal mining, represent a significant percentage of Europe's hard-core unemployment.

My own conclusion is that these three systems are equally valid. It is a mistake to try and impose one of the systems on the other or indeed to be oriented in international discussions to just one system rather than accepting cultural differences.

Differences in the Job Culture

When you look at the United States today, two main social groups stand out with regard to social and employment position. One is the existence of an underclass. It is a fact, in other words, that two, three, four, five percent of the population seem to be living in persistent poverty in concentrated areas of inner cities, ghetto areas as they are sometimes called. They seem to be living in a cycle of deprivation which is virtually inaccessible to public programs.

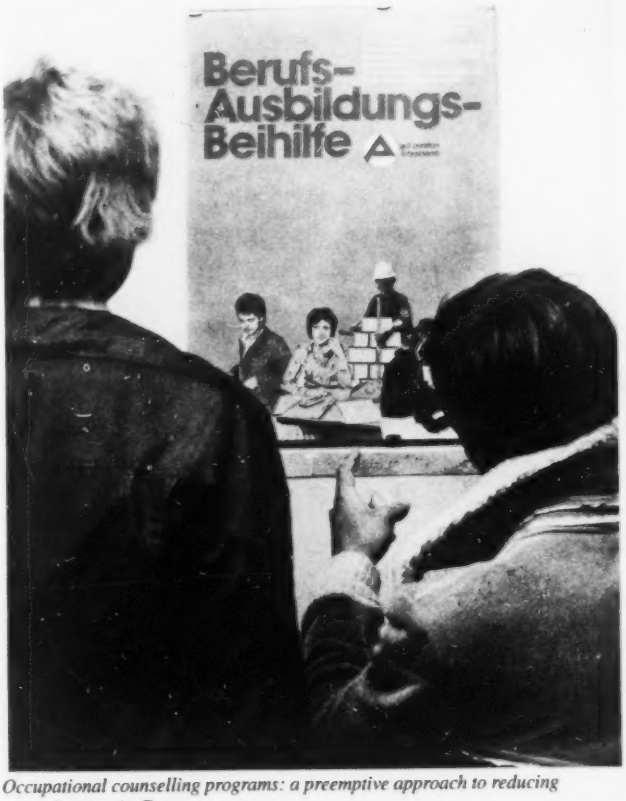
The fact that there are schools does not seem to make much difference to these inner-city underclass areas. Even housing programs do not seem to have the desired effect. It is very difficult to bring employment to these inner-city areas. There is, in other words, a hard-core problem of deprivation, the like of which does not exist at any rate in continental Europe. It is arguable whether some of this has come into existence in some of the large cities of Britain.

There is no easy answer to the underclass problem, and I am not going to try to answer it here, although I do want to say that I am profoundly impressed by the readiness and ability of private institutions in this country to do something about it. I like the emphasis on going there and trying to change things on the spot and by practical action. I could mention numerous examples. I have personally been involved as a Trustee of the Ford Foundation in the setting up of the Local Initiative Support Corporation (LISC). There are the Community Development Corporations (CDC). There are many individuals who go in and try to change things.

The fact that there are schools does not seem to make much difference to these inner-city underclass areas.

This is a big and important subject, but it is not my main topic. There is one other point which is more striking for Europeans, that is the existence of the phenomenon of the so-called working poor. A fairly large number of people, again figures are hard to come by for obvious reasons, having to do with the definition of poverty—who actually have jobs, are working, but their incomes are insufficient to enable them to sustain what one might call civilized existence.

Anyone who earns anything even close to the minimum wage will find it very difficult to feed, house and otherwise provide for a family. And there are quite a few people these days who are in that position. It is to no small extent the result of the restructuring process which has taken place in this country in recent years. All of you know examples, and perhaps you have yourselves been involved in laying off considerable numbers of people who did not remain unemployed for any length of time but who found jobs in which they earn perhaps half, perhaps only a third of what they used to earn while they were employed by larger companies. In other words, there is a significant group of people who have had to take jobs which give them a share in the general economic life of the country, but which do not earn them enough money to live a decent civilized life.



Occupational counselling programs: a preemptive approach to reducing unemployment in Germany.

The interesting fact is that if one talks to people in this country—and I'm not saying anything new or particularly exciting except from a European point of view—the prevailing view is that once people get a job they are somewhere on the ladder or even on the escalator, at any rate at a point at which they can help themselves to get out of what is called dependency. In other words, the prevailing and indeed very largely consensus view in the United States is that insofar as social policy is necessary, its main, if not its only objective is to make it easier for people to gain access to the job world. As a result, it is felt that all these European stories—and I have myself told the story once or twice—about there not being enough work for everybody are nonsense. What you have to do is to get people even a low-paid job and soon they will be able to move up.

...there is a significant group of people who have had to take jobs which give them a share in the general economic life of the country, but which do not earn them enough money to live a decent civilized life.

An Emerging New Consensus

One often hears these days about a new consensus on social policy. There really is such a thing as a new emerging consensus on social policy. I am convinced that the next debate between presidential candidates is going to be totally different from the last one in this country. It is not going to be a debate between a latter-day version of the New Deal and a naive version of supplyside economics,

I am convinced that the next debate between presidential candidates is going to be totally different from the last one in this country.

but it is going to be a debate in which there is a large area of agreement between Republicans and Democrats on things like new-style workfare, i.e., a link between welfare and work. People should be enabled to get jobs, and those like teenage women without training and with two children should at least have the bringing-up of their children recognized as equivalent to work and should get social support on the basis of the fact that they, too, are contributing to the social effort even though our GNP figures don't measure their contribution.

New-style workfare does not simply force people to take a job whatever their social position is, but accepts certain equivalences of work as valid; but it nevertheless insists that the way out of social problems is an individual way and has to do with taking a job and beginning to earn something. You may hear differences between the parties about whether there should be supplements to low wages, paid for out of the public purse, but I think you will not hear any big differences so far as the fundamental answer is concerned. This fundamental answer is going to be: get people a job, however badly paid it is, and they are on the way out of dependency to full participation in economic, social and ultimately political life.

Will it work? A consensus of this kind is always very

An employment office in Germany: getting people off the jobless roles.

important. I would argue that all great changes in social policy in this century have been based on a wide political consensus; so one should not overlook the opportunities which are presented. I have doubts about the effect of this particular approach on the underclass, which would be very limited, and I am also impressed by those of my employer friends, who tell me that they fear that a whole layer of jobs which would be attractive to those who are starting close to the minimum wage but want to work their way up has in fact been exported to other countries. Because it is no longer available in this country it somehow defines a large number of people as the permanent working poor. But having said that, I think there is still a good chance for the American approach to social policy by economic growth in this country.

I do not think that the same is true in Europe. In fact, Europeans are naive if they simply try to apply the American experience to Europe. Real wages in Europe are very sticky indeed, to use the famous expression. They are very sticky indeed in the sense that it is not only difficult (which is true in this country, too) to get any group to accept a decline in real wages once they have reached a certain level, but they are sticky in the sense that even the worst paid jobs are relatively well paid, so that in Europe by and large the principle, if not always the practice, is that anyone who has a job also earns enough to keep a family at a just, reasonable standard of living.

I am not about to criticize this particular fact. I think it is a fact of European life and there is a lot to be said for it, although many Americans find it strange that there should be those who work and who earn a reasonable income and then a large number of increasingly long-term unemployed. Indeed the stickiness of real wages in Europe is one of the main reasons why there is long-term unemployment. But I do start with this fact, and would argue that the right conclusion to draw is not that one has to force American attitudes and ways on Europe. This would be difficult, if not hopeless: it would create turmoil, and is probably one of the reasons why there are elements of instability in the British situation.

New-style workfare... insists that the way out of social problems is an individual way and has to do with taking a job and beginning to earn something.

The answer to the European situation is that, contrary to the United States, one needs a separate and deliberate social policy. The hope to solve everything by workfare, old or new style, and encouraging people to take jobs is probably vain in Europe. What has to be done there is of a different order.

Let me mention a few ideas without discussing them in any detail. The discussion about working time and the redistribution of work makes sense as long as it is couched in the right terms. I personally have preference for the attempts made in France to calculate working time on an annual basis, reduce it on an annual basis and then give employers greater flexibility in the way in which annual working hours are distributed over the year, the month and

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the week. I also have long advocated the idea which is particularly unpopular in Germany, because of historical memories, of a community service for all so that people give some time of their lives as well as some of their money in the form of taxes to the community and thereby contribute to doing some of the jobs which can no longer be paid at the level which is common and customary in Europe.

...in Europe by and large the principle, if not always the practice, is that anyone who has a job also earns enough to keep a family at a just, reasonable standard of living.

In other words, what we need in Europe is a social policy which begins with recognizing and even respecting the rigidities that are undoubtedly present in the wage structure of European economies, but the destruction of which might lead to social upheavals which no one wants. At the same time, social policy measures have to be taken which do not by themselves do obvious harm to economic development, innovation and initiative.

These are short and necessarily abstract comments. I would not draw any hard and fast conclusions from them. I am also fully aware of the fact that when I say Europe, I am talking about a large continent in which there are many different cultures, economic and otherwise. Still, it would seem to me arguable that the main issue in the United States today is the removal of obstacles to growth. If one removes obstacles to growth, one is quite likely to encounter a prevailing attitude to social matters which will help the overwhelming majority of those who are in need of help. Workfare and community development are two examples. In Europe, on the other hand, we have two separate issues, which does not make things easier. One of them is to stimulate growth by a whole variety of measures, and the other, and perhaps most important one, is how to devise a social policy which does not adversely affect work.

I have long been interested in the question of strategic change in developed societies, strategic change which accepts the principles of the economic, social and political systems in which we live, but looks for those levers of transformation, which, while providing more justice do not harm the prospects of prosperity. I think there is a real challenge: how do we devise for Europe a social policy which does not harm the process of economic growth? I have hinted at some of the answers, but a lot more would have to be said about it to be at all satisfactory. ■

...what we need in Europe is a social policy which begins with recognizing and even respecting the rigidities that are undoubtedly present in the wage structure of European economies...

ZUSSAMMENFASSUNG

Wirtschaftswachstum und Sozialpolitik in Europa und Amerika

Es gibt, wie ich es sehe, zwei bedeutsame Streitfragen in der heutigen Politik. Die eine ist, wie wir ein moeglicherweise ununterbrochenes Wirtschaftswachstum stimulieren. Die andere ist, wie wir sicherstellen, dass eine gerechte Verteilung der Fruechte eines solchen Wirtschaftswachstums erfolgt. Ich moechte ueber eine Interdependenz zwischen diesen beiden Streitthemen einen Moment lang nachdenken. Ich moechte ueber eine Wechselwirkung nackdenken in dem Lichte meiner eigenen Erfahrungen in Europa und in den Vereinigten Staaten.

Tatsaechlich sollte ich einwenden, dass Widersprueche zwischen den beiden Zielen der heutigen Politik bestehen. Eines der wesentlichen Hindernisse eines ununterbrochenen Wirtschaftswachstums besteht in den Verkrustungen, die durch Dekaden von Sozialpolitik hervorgerufen wurden.

Auf der anderen Seite ist es eine der aufregendsten Entdeckungen der zurueckliegenden Jahre und ganz besonders der Jahre seit der Wiederbelebung des wirtschaftlichen Wachstums in den fruehen achtziger Jahren, dass das Wachstum an einigen vorbeigeht und sie zurueckla esst. Es ist eher Wirklichkeit in Grossbritannien als in den Vereinigten Staaten, aber Realitaet in gewissem Umfang auch in Deutschland, dass bedeutsames Wirtschaftswachstum einhergeht oder jedenfalls begleitet wird von dauerhafter Langzeit-Arbeitslosigkeit. Das Argument ist, dass diese Unterschiede ein Teil der Realitaet sind, die wir besser als solche akzeptieren sollten, statt uns nur eine Sicht der Dinge zuzulegen, wo auf der gesamten Welt etwas passiert oder passieren sollte.

Es scheint mir, als waere die vordringliche Streitfrage in den Vereinigten Staaten heute die Beseitigung der Wachstumshindernisse. Wenn man die Wachstumshindernisse beseitigt, ist es sehr wahrscheinlich, dass man die vorherrschende Einstellung zu sozialen Fragen trifft, die der ueberwaeltigenden Mehrheit derjenigen reicht, die Hilfe noetig haben.

Die unseren Arbeitsbeschaffungsmassnahmen aehnlichen "workfare"—Programme und die gesellschaftliche Entwicklung sind zwei Beispiele. Auf der anderen Seite haben wir in Europa zwei gegensaetzliche Probleme, was die Sache nicht einfacher macht. Eines davon ist, wie man das Wachstum mit einer Reihe von Massnahmen stimuliert, das andere und vielleicht wichtigere ist es, eine Sozialpolitik zu ersinnen, die keine nachteiligen Effekte hat. Ich bin schon lange an einer Strategieaenderung in den entwickelten Gesellschaften interessiert.

Eine Strategieaenderung die die Grundprinzipien der Wirtschaft sowie das soziale und politische System beruecksichtigt, in dem wir leben, gleichzeitig aber nach den Hebeln zur Umformung sucht, die uns mehr Gerechtigkeit liefern und dabei nicht die Aussichten fuer die Prosperitaet beeintraechtigen. Ich glaube, es gibt eine reale Herausforderung: Wie erdenken wir eine Sozialpolitik fuer Europa, die den Prozess des Wirtschaftswachstums nicht behindert. Ich habe einige Antworten angedeutet, aber es muesste sehr viel mehr da zu gesagt werden, um wenigstens halbwegs zu befriedigen. ❑

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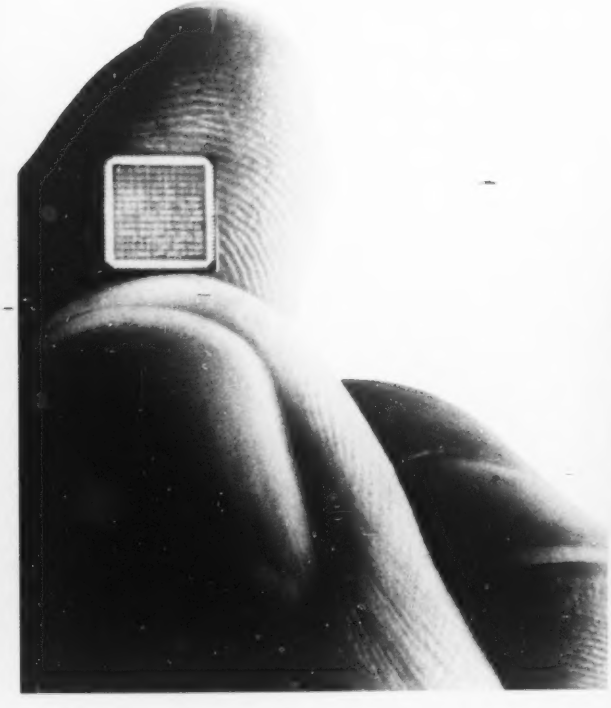

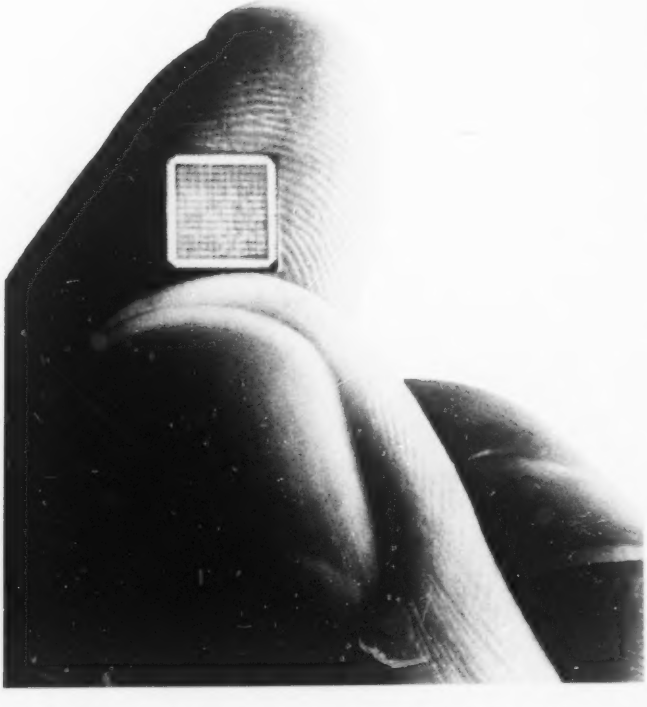

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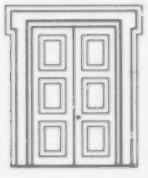

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Gehaelter von Spitzenmanagern in US-Tochtergesellschaften von deutschen Firmen: Platz fuer Verbesserungen

Compensation in U.S. Subsidiaries of German Companies: Room for Improvement

Joachim R. Bechtle
President
J.R. Bechtle & Co.

Management compensation decisions in U.S. subsidiaries of German companies are frequently shrouded by uncertainty and subjectivity. While compensation studies have always been available for the American or the German market, no compensation study had focused on the special situation of German subsidiaries in the United States. A survey by J.R. Bechtle & Co., Boston and San Francisco, has addressed this niche. The results show a number of differences with American companies. In summary, American companies of similar size provide better compensation and financial incentives, while German subsidiaries often excel in the benefit area.

The compensation ambiguity is more pronounced with medium-sized and smaller subsidiaries of German companies in the U.S. Two reasons appear to be primarily responsible for this. Firstly, these German subsidiaries, while formally structured like other American companies, are frequently more limited in their independent decision making, making them more comparable to divisions of U.S. corporations. Secondly, the decision-making on compensation for presidents of German subsidiaries in the U.S. is typically vested with the German parent company. It is not unusual that salaries of the U.S. managers are compared with their peers in the parent company. Particularly during the high dollar period, appropriate compensation packages or salary increases were turned down occasionally by the German parent company, because when directly translated into deutschmarks, the U.S. compensation of the U.S. manager exceeded the deutschmark compensation not only of his parent company peers, but often his superiors.

Compensation of Presidents

The base salary of presidents of German subsidiaries regularly correlates with the size of the operations in the U.S. Fifty percent of the presidents of firms with under $10 million sales receive a base salary of $80,000 or less. The median increases to over $150,000 in firms with sales exceeding $100 million. The survey showed the same upward trend of the median base salary when analyzed by employees of the subsidiary. For example, the median base salary is in the compensation range of $61,000 to $80,000 for companies with under 20 employees. It moves to the $101,000 to $150,000 range for companies with over 101 employees. To put this in perspective, the detailed results were compared with recent compensation studies for U.S. companies. The comparison showed a higher compensation average for the independent American company, while German subsidiaries clearly provide better compensation when compared with divisional presidents of American companies in the same size category. (Table 1). With increasing size and autonomy, German subsidiaries in the U.S. conform more and more to U.S. compensation levels. In general, companies with over $50-million sales can be found to meet U.S. payment scales.

An overwhelming number of German subsidiaries pro-

vide their presidents an additional bonus opportunity. The bonus percentage increases directly with the base salary level. The data clearly proved that a lower base salary of the president is not compensated by a higher performance-oriented flexible bonus compensation. The higher the base compensation, the higher the bonus possibility. This rule applies in the same way for American companies. Experience shows 20 percent as the critical cut-off point to achieve the desired motivation factor from a bonus arrangement. Less than 50 percent of German subsidiaries reach this level. Studies of American companies again show that presidents of these firms average a higher bonus compensation than their counterparts in German subsidiaries.

Management Stability in US Subsidiaries of German Companies (percent)

Position:	1st tier management	2nd tier management				
	President	VP Sales	VP Marketing	VP Manufctring.	VP Finance	VP Other
Years in the position:						
1–2 years	39	42	67	46	40	26
2–5 years	21	31	17	36	25	36
6–10 years	26	20	5	14	27	30
10+ years	14	7	11	4	8	8
Total	100%	100%	100%	100%	100%	100%

Compensation of Second-Tier Managers

Compensation levels fluctuate among the different second-tier management positions. On average, the base salary compensation for managers of the second tier is 30 percent to 40 percent below the first-tier management compensation. This compares to or is slightly above findings of American studies differentiating between first- and second-tier management compensation.

The base salary comparison of second-tier management shows the V.P. Sales generally ahead of the V.P. Manufacturing and the V.P. Finance. This difference becomes more pronounced in a comparison of total compensation, since the V.P. Sales generally receives a higher bonus compensation than the other V.P. positions.

The size of the bonus, expressed as a percentage of base salary, tends to be below that of the president. American studies again show on average higher bonus compensation for the second-tier managers in companies of similar size.

Other Financial Incentives

Very few of the surveyed companies provide some form of stock ownership to their top management. This is far below the general U.S. practice. Studies of American companies show that 63 percent of all firms provide for stock option plans in one way or another for their senior management. It is believed that a better utilization of stock opportunities by German companies would result in attracting more qualified management and increasing the stability of management in a company. Some companies mentioned that a stock-ownership plan by management was basically agreed upon, but had not yet been implemented by the German parent company.

Thirteen percent of the participants in the study had established a profit-sharing compensation for their presidents. Profit sharing is a financial incentive separate from the bonus agreement. It is contractually agreed upon and solely dependent on the actual profitability of the company. Second-tier managers only very exceptionally are provided stock ownership or profit-sharing rights.

Insurance and Other Benefits

All German subsidiaries offer their managers some kind of health insurance. The results show a broad range from complete coverage of all health expenses by the company to a deductible of over $200 annually and coverage of 80 percent or less. The health insurance is generally identical among first-tier and second-tier managers.

Dental insurance is regularly handled separately from health insurance in the U.S. German companies in the United States regularly offer their senior management a better dental insurance package compared to American companies.

Companies in this country have a certain amount of flexibility in the structuring of life insurance arrangements among various management positions. Ninety percent of the presidents of German subsidiaries in the U.S. have company life insurance. This corresponds to the findings for presidents of U.S. companies. These percentages are lower for the second-tier management positions. For the second-tier positions, the tendency exists to limit the insured amount to one times the annual salary.

Base Salary Comparison Between Presidents of US Firms and Divisions of US Firms and Presidents of US Subsidiaries of German Companies

Sales (US $ million)	$1–10	$11–50	$50–100
JRB & Co. Study	100%	100%	100%
US Study—			
Independent Companies	75–118%[1]	120–147%[2]	106%
Divisions of US Firms	N / A	82–93%[3]	68%

1. US study based on an average of $60 thousand for companies with under $2 million in sales and $94 thousand for companies with between $5 million and $10 million sales.
2. US Study based on an average of $120 thousand for companies with between $10 and $25 million in sales and $147 thousand for companies with between $26 million and $50 million sales.
3. US study based on an average of $82 thousand for division Presidents of divisions with between $10 and $25 million in sales and $93 thousand for divisions with between $26 million and $50 million sales.

Retirement Income

The survey results show that 95 percent of the subsidiaries of German companies with sales of over $10 million offer pension plans in one form or another. 75 percent of the companies with under $10 million sales offer additional retirement income for their management. This compares with 89 percent of the American companies with over 250 employees that provide pension plans for their management.

Among the various retirement plan options, German subsidiaries appear to favor the 401 (K) plan. A number of companies which presently do not have a pension plan or one of the other alternatives are in the process of establishing a 401 (K) plan.

Perquisites

The prevalent perquisites for the management of German subsidiaries in the U.S. are company car, club membership, and to a degree, favorable company loans. Other perks which are customary with American companies were rarely mentioned, such as legal services, tax counseling, investment planning, or estate planning.

The company car is the most common perquisite for managers of German subsidiaries. Presidents of German subsidiaries receive this benefit more often than their counterparts in American companies. Less than 50 percent of the surveyed companies, however, provide this benefit to their second-tier managers.

The club membership proves to be another popular perk for the president of German subsidiaries. Most prevalent is a membership in a country club, which frequently can be used as a lunch club as well. On the other hand, only 10 percent of the firms offer club membership to their second-tier management.

Conclusion

The study showed a very high fluctuation among senior management of German subsidiaries. For example, 40 percent of the presidents of German subsidiaries had been with their companies for only one or two years. (Table 2) This holds true regardless of whether these subsidiaries are being run by German or American managers.

Management stability, on the other hand, is regularly mentioned as a key objective by German companies in the United States. This stability can on the average only be achieved if qualified managers are attracted to the U.S. operations. Compensation packages have to be structured to motivate and to create a long-term employee commitment.

Of the compensation elements, the salary package has typically an immediate motivation impact. We find only too often German companies compromising in this area. This results in either less qualified or less motivated management and personnel. Financial incentives, such as stock options or profit-sharing and retirement plans, insure the long-term commitment of management. Again, German companies fall short in this area, particularly as it relates to

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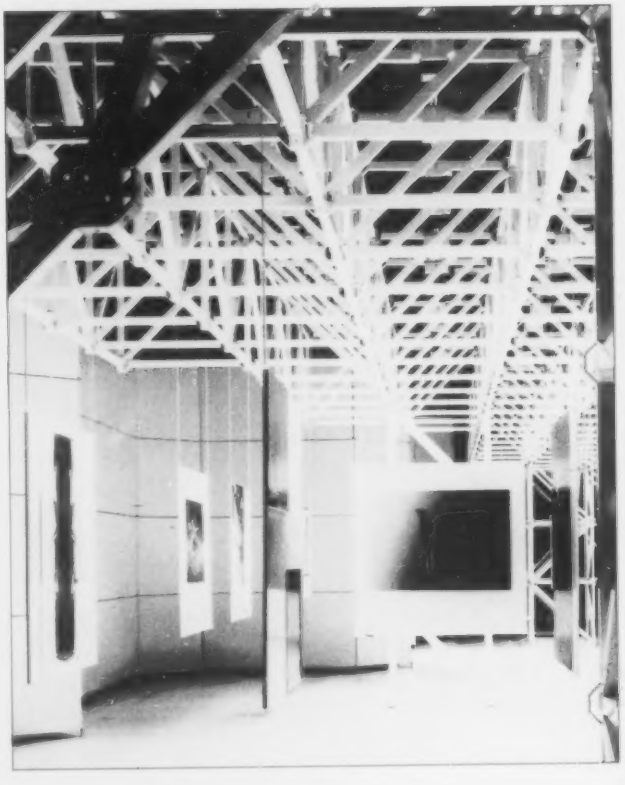

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ownership alternatives. Even the retirement area has room for improvement, despite the positive findings of the study. While a very high percentage of German companies offer retirement plans, some of these plans, like the 401 (K) or the Simplified Employment Pension plan (SEP), allow employees to defer a portion of their current compensation to a tax-sheltered retirement fund and do not necessarily require company contributions. This conservative approach by German companies in the United States is particularly surprising as these companies are used to substantially more encompassing retirement benefit plans in Germany. Not surprisingly, management stability in the German parent company is higher that that found with the U.S. subsidiaries.

Many German companies have come under substantial pressure with the collapse of the dollar during the last 24-36 months. New strategies are required, reflected by a growing trend towards production activities in the United States. Quality of management becomes even more important under these circumstances compared to the—in retrospect—relatively easy selling environment during the rising dollar period between 1981 and 1986. Compensation and benefits are the first areas to look at to attract qualified, motivated and committed management. ■

ZUSAMMENFASSUNG

Gehaelter von Spitzenmanagern in US-Tochtergesellschaften von deutschen Firmen: Platz fuer Verbesserungen

Entscheidungen ueber Management-Gehaelter in US-Tochtergesellschaften deutscher Unternehmen sind haeufig von einem Schleier der Unsicherheit und Subjektivitaet umgeben. Waehrend schon immer Gehaltsstudien fuer den amerikanischen und deutschen Markt erhaeltlich waren, gab es keine Studien, die speziell auf die Stituation bei den deutschen Tochtergesellschaften in den USA ausgerichtet sind. Auf diese Luecke zielt eine Untersuchung von J.R. Bechtle & Co., Boston und San Francisco. Die Ergebnisse zeigen einige Unterschiede zu amerikanischen Unternehmen. Im allgemeinen gewaehren die US-Firmen vergleichbarer Groesse hoehere Gehaelter und finanzielle Anreize, dagegen haben die deutschen Toechter haeufig einen besseren Versorgungsbereich.

Viele deutsche Unternehmen sind unter erheblichen Druck geraten durch den Einbruch des Dollars in den letzten 24 Monaten. Neue Strategien sind gefragt, basierend auf einem zunehmenden Trend zu Produktionsaktivitaeten in den USA.

Die Qualitaet des Managements wird unter diesen Umstaenden noch wichtiger, verglichen mit den rueckblickend relativ guenstigen Verkaufsbedingungen in der Zeit des steigenden Dollars von 1981 bis 1986. Gehalt und Versorgung sind die zentralen Ansatzpunkte, um ein qualifiziertes, motiviertes und verantwortungsvolles Management anzuziehen. ❑

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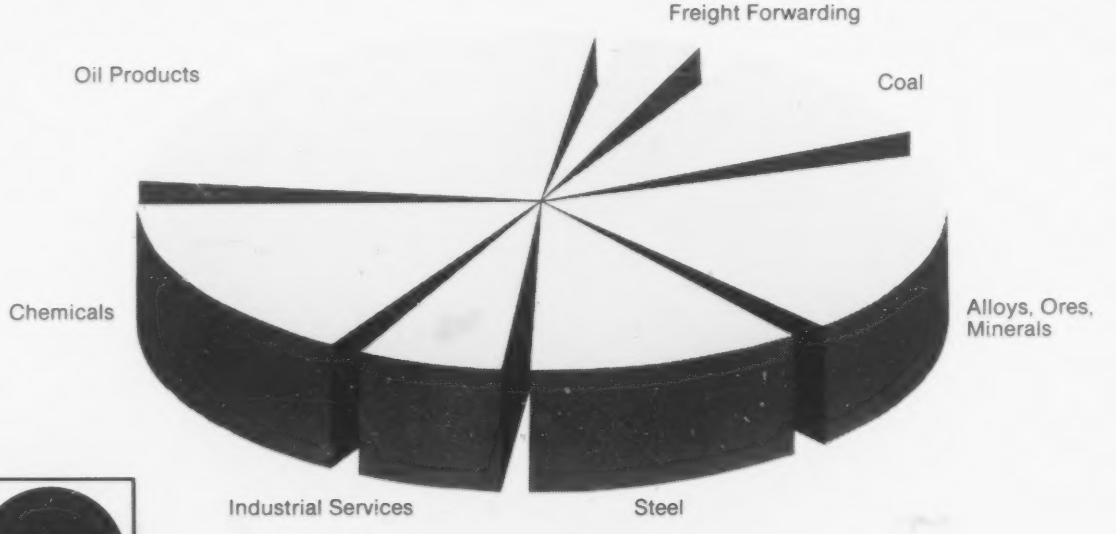

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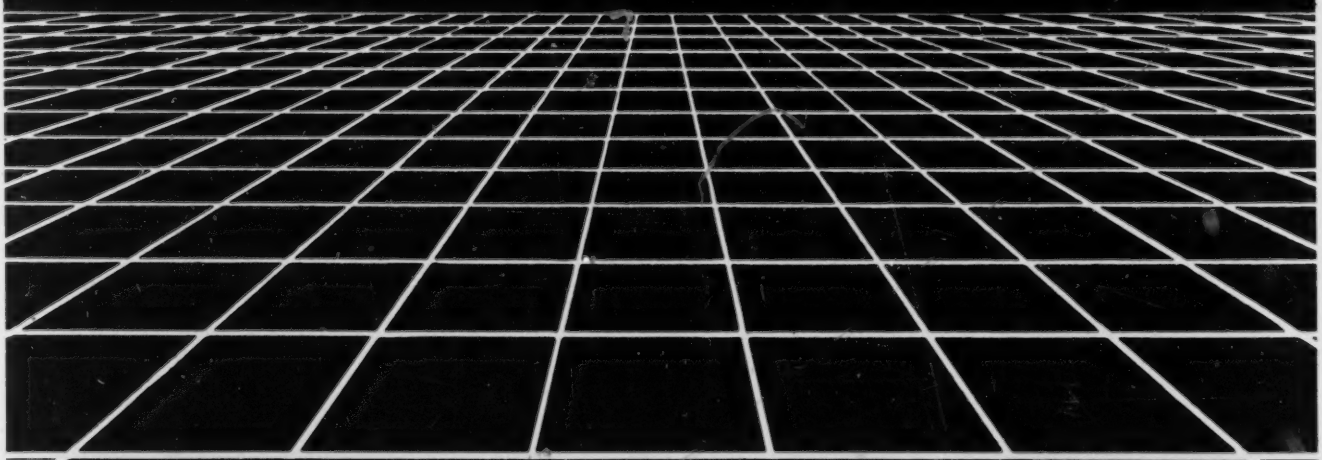

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Strategisches Personalmanagement in der Bundesrepublik

Human Resource and Work Organization– Strategic Personnel Management in the Federal Republic

Andreas Schleef
Member of the Board of Management
Audi AG

I hope to present in this article some thoughts about "Human resource and work organisation—strategic personnel management in the Federal Republic of Germany." I have no intention of giving you a complete picture of the situation of German industry as a whole. But what I can do is to give you a very definite example, taking my own company: Audi.

Audi is one of seven German automobile companies. Last year we produced close to 400,000 vehicles in our own plants, located in Ingolstadt and Neckarsulm. This corresponds to a sales volume of just under DM 10 billion. We employ a workforce of very nearly 40,000, with about 31,000 hourly-paid, 7,000 salaried employees and 1,500 trainees and apprentices.

Our business is manufacturing automobiles, and one of our cars, the Audi 5000, was the most aerodynamic volume-produced car in the world when it was introduced. In the past few years many competitors have tried to follow our lead in the aerodynamic sector. For that reason I asked our chief designer one day whether the constraints of aerodynamic body design would mean that all cars would ultimately come to look more or less the same. By way of an answer he gave me a quotation: "All birds have an aerodynamic shape, but it is not difficult to tell the difference between an eagle and a canary."

Now what does this tell us? As a domesticated seed-eating species, the canary has adapted itself to the conditions of its environment in order to survive, just as the eagle is ideally adapted as a bird of prey in the wild. They have both adapted, on the principle that form follows function. But it would be quite wrong to attribute the *form* of the bird to *one* isolated function; in this case aerodynamics.

Now let me apply this observation to our topic of personnel management:

Firstly, no approach to personnel management is either right or wrong on principle. The value of a particular style of personnel management depends solely on how well it fits in with the *objectives* of a particular corporation and the *existing circumstances*: in other words *form follows function*.

Secondly, only a very few companies can follow the eagle, and select their area of operations with complete freedom to suit their own needs. The situation of many companies, even in a free economy, is more like that of the canary, which has to find a way of surviving in the face of

No approach to personnel management is either right or wrong on principle.

constraints and restrictions imposed from outside. The essential factor for survival here is the ability to adapt as well as possible to a continuous process of *structural change*. And the company that can anticipate these changes quickly and accurately will be the best equipped to survive.

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Thirdly, there is nothing to be gained by casting envious looks at the environment of other companies, which may appear to be better. The eagle would hardly survive in the constraints of a bird cage, for all the security it offers, and the canary would hardly survive the danger of the wild for all its freedom and space. In other words, it would pay us to be careful when we are tempted to apply the supposed advantages of another kind of personnel management *directly to our own company*. It is essential to take account of local conditions at the plant and social circumstances that have grown up in the course of time.

But why am I taxing you with these analogies, which may in fact be completely invalid? I believe there is good reason for doing so. American management literature has also reached West Germany, although with a certain time lag. I am thinking for instance of some bestsellers such as **Porter's** *Competitive Strategy*, **Watermann's** *In Search of Excellence*, or **Naisbitts'** *Megatrends*. These books have not been without effect:

Firstly, they have led some in Europe to believe that America's managers follow all kinds of new fashions as if they were divine revelations.

Secondly, they suggest to us that successful management is based on very strong, distinct and highly individualist personalities, which impose their own stamp on the company, whatever kind of "Management by" they may be using. Similarly, the impression is given that social and cultural backgrounds have no influence whatsoever.

Thirdly, these books give us Europeans a very plausible explanation of the self-confident approach of many American managers, who often come to Europe expecting to do good business there as well, without giving any thought to the social and cultural circumstances existing in the host country.

And *fourthly*, the reception these books have met with, today in Europe as well, has triggered a search for *the* right strategy. Without any consideration being given to the difference in circumstances, comparisons are drawn between various management cultures, in a way that I personally consider to be anything but productive.

Operational Considerations

Please do not expect me at this point to offer the usual attempt at defining another management typology, such as perhaps *Management by birdie*, even though I may have been tending in that direction with my eagle and canary analogies.

At the outset, I emphasized the importance of considering the circumstances in which the company operates; now I can detail the four main circumstances affecting my own company.

The market: In view of its dependence on export, German industry's one chance of asserting its position on the world market is that it maintain the distinction between its products and the mass-produced goods coming from countries where labor is cheap. It is our intention to meet customer demand for individual and high-quality products, while offering appropriate value for money. This is the only way we can achieve an edge over the competition on world markets. What is more, with this policy we are also taking the offensive and setting international standards.

Technology: Industries with high wage levels can only compete successfully if they make intensive use of the potential of new technology. But no matter how fascinated we may be by the possibilities offered by the new technologies, the future of labor is not so much a technical problem; in fact less so than ever before. People in Germany are becoming increasingly aware that it is not the development of new technologies and systems alone that will improve the productivity and competitive strength of our companies, but the adaptability and capability of the personnel in those companies. Technological change alone, without qualified personnel, has no chance. To operate the factory of the future you need the workforce with a future.

In view of its dependence on export, German industry's one chance of asserting its position on the world market is that it maintain the distinction between its products and the mass-produced goods coming from countries where labor is cheap.

In our company this awareness has had far-reaching practical consequences. With the increasing automation of our equipment, we have also raised the qualification level of our employees. In 1982, 40% of our production personnel were skilled workers in the metal-working trades or allied areas, and in 1986 the figure was as high as 50%. By 1990, we want to increase the proportion of skilled personnel to at least 60%

The social partnership: Every country exists within a particular set of socio-political circumstances. West Germany possesses a highly developed system of worker co-deter-

mination, with its own legal framework. Technological, organizational and personnel changes can no longer be carried out without taking account of these normative provisions.

Stable employment and long-term personnel planning are things that can hardly be called into question: the far-reaching effects of co-determination by the unions and workforce make it difficult to reduce manning levels in the short term or to change the structure of the workforce, and—particularly for the larger companies—stand in the way of a classic hire-and-fire policy.

What from an American point of view may seem to be an obstacle, can also prove to be an opportunity. Human investments in a highly qualified staff of regular employees will only bear fruit with stable employment and qualitative personnel planning.

The social partnership thus compels companies to adopt a strategic approach oriented towards long-term needs.

"Human" investments in a highly qualified staff of regular employees will only bear fruit with stable employment and qualitative personnel planning.

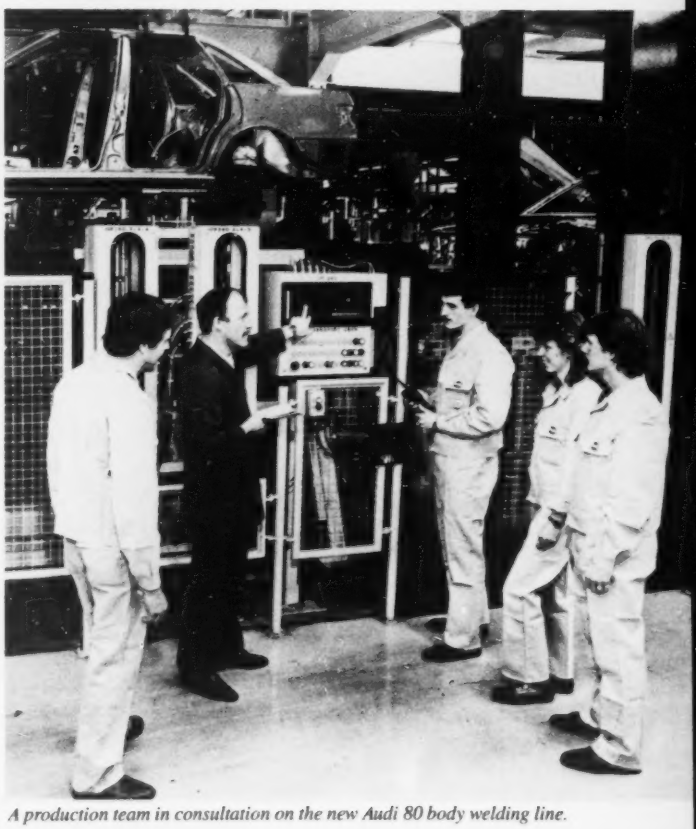
Demographic development: The potential pool of productive labor in West Germany will continue to decrease significantly as a result of many years with a low birth rate. All else being equal, the present figure of 28 million will drop by 1.7 million (or 6%) in the 90s and by about 9 million (32%) in the period from the year 2000 to 2030. But what is even more alarming than the *drop* is the *way* the population make-up will change.

The percentage of people under the age of 30 in the potential labor pool will drop drastically: from the current level of about 33% to about 20% in the year 2000. This means that structural changes in future will have to be borne increasingly by employees in the middle and upper age groups.

We must start making an effort now to prepare ourselves for this predictable shortage of skilled labor in order to meet the high level of demand for qualified workers in the long term. *One* good way of doing this is including women in the workforce. With currently just over 15%, Audi has one of the highest levels of female employment in our automotive industry; and the percentage of women apprentices in training for technical trades is actually in excess of 25%.

Flexible organization of working hours, increased internal mobility, a system of permanent vocational training, a higher proportion of women in productive employment, and an extension of the productive employment phase with flexible arrangements for retirement ages: all these elements contribute to a package of measures which we are taking in response to structural change.

Looking towards the future, it is clear that the *factory of the future* is one main development that will confront us with new tasks. New production concepts, a different arrangement of working hours, higher qualification requirements and new compensation systems will necessitate comprehensive and suitable adapted overall concepts.



A production team in consultation on the new Audi 80 body welding line.

In these circumstances, the increasingly complex decision-making processes and the more far-reaching effects of changes in the factory can only be developed to form an efficient overall system if personnel management is involved in the planning processes.

Attitudes Towards Personnel Management

However, the managements of many companies have not yet realized which way the wind is blowing and, even in the present day and age, still regard the work of the personnel department merely as a necessary but burdensome evil, and the role of personnel management as a kind of buffer between labor and management. But anyone who thinks along these lines will never be able to take full advantage of the human resource, and will not be able to handle it or develop it properly.

Strategic personnel management is more than just personnel administration. In our company personnel management means:

- that in addition to the traditional tasks, we also carry out qualified personnel planning and organization development;
- that management guidelines are laid down and implemented in the form of modern management tools;
- that we analyze the potential of existing *human resources* in the form of a quantitative and qualitative comparison of what we have and what we need;
- that the training and development of blue-collar and white-collar workers is supported by systematic plan-

ning for future staff replacements, which at the same time constitutes an incentive for qualified employees to remain with the company over the long term; and
- that we develop vocational and follow-up training concepts in line with the medium and long-term developments anticipated within the company, and these are based on the principal that the company's training activities are an *investment* in the workforce.

Man and Technology

The implementation of new technologies must be accompanied by *organizational changes*. The way in which we use personnel must itself be examined with possible innovations in mind if the company is to be able to react flexibly to new trends in the market, in technology and in society.

The Taylorist doctrine, which preaches an extreme division of labor and which still guides many companies in the way they use technology and organize their work, may have had some justification. But in our present situation we would be unable to cope with current structural changes in the factory if we were to follow this concept, which places extreme emphasis on the division of labor and restricts highly qualified personnel to the more demanding and skilled jobs in preparing and backing up production. On the contrary: if we kept to the principle of maximum division of labor, this would lead to significantly higher costs and would reduce our flexibility and impair our ability to innovate. And workers who are degraded to machine minders or unskilled residual jobs will have little inclination to produce high quality and ensure maximum utilization of expensive machinery and equipment.

We must start making an effort now to prepare ourselves for this predictable shortage of skilled labor in order to meet the high level of demand for qualified workers in the long term.

In our experience, the introduction and implementation of complex, computer-integrated production systems are never likely to be successful if the planners regard factory personnel merely as a subsidiary factor. The best way that a modern personnel operation can contribute towards the factory of the future is by taking steps *now* to promote the training and qualification of employees so that they will be able not merely to accept technical innovations passively, but to play a constructive role in the introduction of new systems by virtue of their own valuable experience. This is not a question of ideology, but makes sound economic sense.

If our efforts are to be successful we shall have to adopt a new approach to planning which includes personnel-related targets and takes account of the factors affecting the workforce. So we should not follow a policy of staff follows investment; rather we must integrate technical and personnel planning, since this is the only way of combining technical and organizational innovation with new approaches to labor relations and employee welfare, thus ensuring a sound personnel basis for investment planning.

But when strategic personnel management is involved in the planning process, it can also implement its own targets of personnel policy. To mention just a few of the more important targets:
- Developing flexible work structures with no monotonous or one-sided residual jobs;
- Raising levels of qualification as a means of ensuring a high level of availability of equipment and high product quality;
- A balanced personnel structure, which also means employing a corresponding number of older employees and disadvantaged employees; and
- Reversing tendencies towards excessive division of labor, i.e., transferring planning and production preparation back into the production divisions themselves.

When planning engineers hear demands for the integration of technical and personnel planning, you are likely to see some pained looks and hear objections about technical constraints. But this is the real opportunity, since the development and implementation of new technologies, unlike biological evolution, are processes that are not subject to the laws of nature. In fact, new technologies give us new scope and freedom. This applies both to the planning and organization of production processes and manufacturing structures, and to working conditions and labor-management relations.

Workers who are degraded to machine minders or unskilled residual jobs will have little inclination to produce high quality.

Let me describe briefly from our experience how this new scope can be put to good use.

When we put in new, highly automated manufacturing equipment with industrial robots in the body welding shop, we adopted a new approach to organizing working methods, with appropriate personnel measures.

Audi's new Quality Centre houses all quality-assurance functions that influence product quality before the start of production.

The result was the introduction of what we call production teams, which are each responsible for a particular section of the manufacturing operation. In the work of these production teams, the residual manual jobs are supplemented by control and supervision tasks, maintenance and repair work, and inspection. This deliberate expansion of job content also serves the purpose of encouraging production personnel to build quality, since quality cannot be put into the product after manufacture merely by inspection. In this way the staff operating our equipment benefit from real job enrichment.

Working as part of a team also enables the factory to vary their job content. With this *job rotation*, we can not only compensate for one-sided stresses; we also bring about a continuous process of further qualification. The workers learn from each other and with each other. This is

The team concept has long since become established in other areas of manufacture and in our company has become a general trend within the production process.

conducive to a team spirit and a flexible way of thinking. Since then, the team concept has long since become established in other areas of manufacture and in our company has become a general trend within the production process.

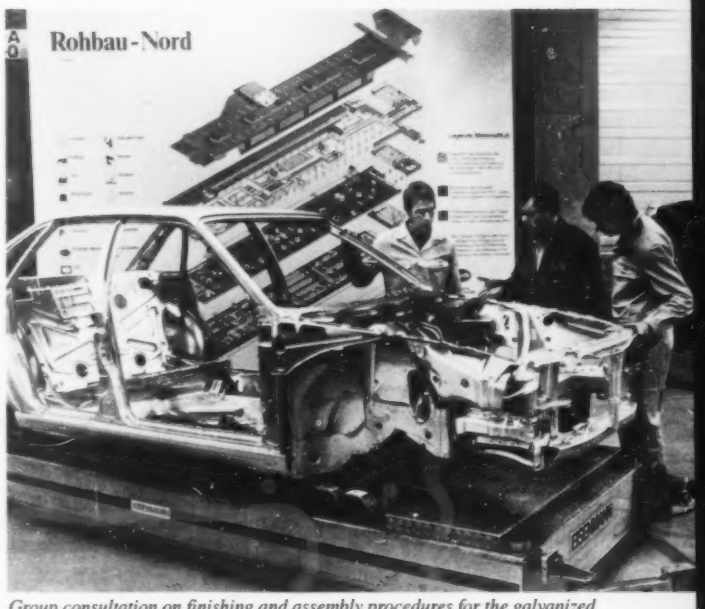
The experience that Audi gained with the implementation of complex technologies has shown that by taking account of these factors we can create new work structures that allow new technical systems to be introduced and put into practical use without major problems.

Implementing new production concepts and flexible manufacturing structures in this way requires skilled workers. Not so much the skilled workers of the old school. What we need is a new type of skilled production worker, of a kind that is only just beginning to emerge, who has been able to acquire many different skills on the basis of a broad general training, and who is therefore very versatile in the factory.

In a flexible interlinked manufacturing system, the worker needs *both* specialized technical competence and a more general kind of *social competence* in relating to his work environment. This is because the demands placed on his technical understanding are increasing, the scope available for decision-making and responsibility is greater, and he is compelled more that ever before to recognize the effects of his actions or omissions on the system as a whole.

In the Federal Republic of Germany we are making efforts to respond to these changes in the nature of the technical trades with revised guidelines for the metal-working and electrical trades: in addition to the traditional skills, these trades now also cover techniques used in electronics, control systems, and new process technology.

But in future a broad-based training at the beginning of a career in the technical trades will be no more than a requisite preparation for continual further training in line with technical progress: in future the philosophy of in-house training efforts will be a life-long learning process. The frequency, content and intensity of training courses will all increase, and thus also the necessary effort and expendi-



Group consultation on finishing and assembly procedures for the galvanized body of the Audi 80.

ture put into the training operation. Significantly greater demands will be placed on employees in terms of their willingness and ability to acquire additional qualifications.

To give you just a few concrete figures from the whole complex of basic and supplementary training: the cost of the *vocational training* carried out by Audi has increased from DM 26.8 million to DM 38.9 million (or 45%) within the last five years. Expenditure for purely *supplementary*

Industries with high wage levels can only compete successfully if they make intensive use of the potential of new technology.

training has increased over the last ten years from DM 420,000 to DM 9.7 million annually, a rise of 2,300%.

Let me now come to a conclusion. I hope I have been able to make it clear that due consideration to the human resource, their recruitment and selection, the way they are integrated in the organization, the way they are utilized, looked after, managed, trained and promoted, their careers, and their own values and ideas are *all* necessary parts of company strategy. In addition to the factors of strategy, structure and system, we must also work with the factors of staff, skills and style.

Personnel management must be strategically oriented and must have equal status as a major company function. At this stage, one difference should also be apparent (if I may return by my first analogy) between the eagle and the canary: between personnel management and personnel administration. The personnel function can only contribute towards the success of a company if it accepts the challenge of structural change: if it translates the undoubted need for action into a long-term, qualitatively oriented, active strategy.

And this is what we at Audi are trying to do. ■

ZUSAMMENFASSUNG

Strategisches Personalmanagement in der Bundesrepublik

Beginnen wir mit etwas Statistik: Audi ist einer von sieben deutschen Automobilherstellern. Im vergangenen Jahr haben wir beinahe 400.000 Fahrzeuge in unseren Werken in Ingolstadt und Neckarsulm produziert. Das entsprach einem Verkaufsvolumen von ca. DM 10 Mrd. oder ungefaehr $5.4 Mrd. Wir beschaeftigen fast 40.000 Mitarbeiter, davon ca. 31.000 auf Stundenlohnbasis, 7.000 angestellte Gehaltsempfaenger und 1.500 Trainees und Auszubildende.

Lassen sie mich nun zum Personalmanagement kommen:

1. Keine Methode des Personalmanagements ist prinzipiell richtig oder falsch.
2. Nur sehr wenige Gesellschaften koennen sich ihren Geschaeftsbereich in voellig freier Verfolgung eigener Wuensche aussuchen.
3. Es ist nichts damit gewonnen neidische Blicke auf andere Branchen zu werfen, die besser zu sein scheinen.

Mit Blick auf die Exportabhaengigkeit hat die deutsche Industrie nur eine Moeglichkeit ihre Position im Weltmarkt zu behaupten: sie muss den Vorsprung ihrer Gueter vor den Massenguetern aus den Billiglohnlaendern halten. Bei unserem Lohnniveau ist Spitzenqualitaet und eine breite Palette an verschiedenen Modellen zu einem guenstigen Preis nur moeglich, wenn wir optimalen Gebrauch von unserem Know-how und den kreativen Moeglichkeiten unseres Personals machen.

Industrien mit hohem Lohnniveau koennen im Wettbewerb nur erfolgreich bestehen, wenn sie das Potential der neuen Technologien intensiv gebrauchen. Technologischer Wechsel allein, ohne qualifiziertes Personal, hat keine Chance. Um die "Fabrik der Zukunft" zu bedienen braucht man die "Belegschaft der Zukunft".

Jedes Land lebt mit bestimmten sozio-politischen Gegebenheiten. Deutschland hat das hoechstentwickelte System der Mitbestimmung, auf gesetzlicher Grundlage. Technologische, organistorische und personelle Veraenderungen koennen nicht laenger ohne Beruecksichtigung dieses Umstandes durchgefuehrt werden.

Mit Blick auf die Zukunft ist es klar, dass die Fabrik der Zukunft eine der wichtigsten Entwicklungen ist, die uns mit einer neuen Herausforderung konfrontiert. Die Einfuehrung neuer Technologien muss von organisatorischen Aenderungen begleitet werden. Nach unserer Erfahrung ist die Vorstellung und Einfuehrung von komplexen, computer-integrierten Produktionssystemen niemals erfolgreich, wenn die Planer das Personal bestenfalls als untergeordneten Faktor beruecksichtigen.

Wenn unsere Anstrengungen erfolgreich sein sollen, muessen wir neue Planungen unternehmen, die personalbezogene Ziele beinhalten und solche Faktoren, die Arbeitskraefte anziehen. Personalmanagement muss strategisch ausgerichtet sein und den gleichen Status wie andere Hauptfunktionen des Unternehmens haben. Das Personalwesen kann zum Erfolg nur beitragen, wenn ein Unternehmen die Herausforderung der strukturellen Aenderung annimmt: wenn es den unzweifelhaften Bedarf an Handlung in eine langfristige, qualitaetsorientierte, aktive Strategie umsetzt. Das ist es, was wir bei Audi versuchen. ❑

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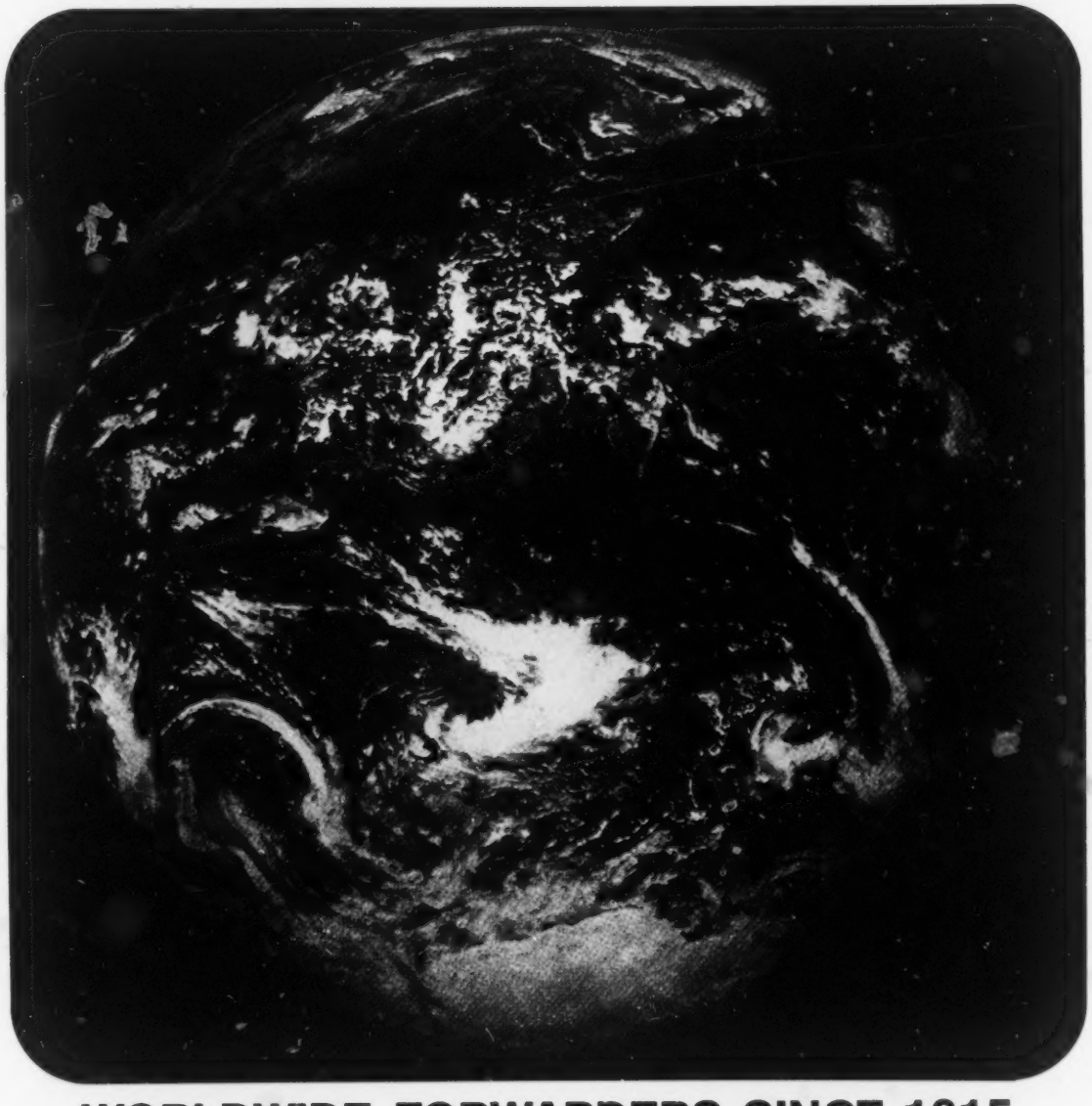

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Weltweite Entwicklungen in der Besteuerung

World Trends In Taxation

Richard M. Hammer
National Director, International Tax Services
and
Chairman, International Tax Services Panel
Price Waterhouse

In the face of public concern and evidence that tax policy has been stifling entrepreneurial spirit, the industrial countries are in the midst of substantial tax reform—or at lease substantial tax change. In the following pages I relate trends in U.S. tax policy to parallel developments in the other O.E.C.D. countries.

There are at the present time several important tax trends in the industrial countries, and the United States is in the forefront of several. These include:

- Reduced income tax rates for both individuals and corporations.
- A broader tax base—more items included in income and fewer deductions and credits—for both individuals and corporations.
- Provisions that make it relatively more expensive to operate abroad (tax haven legislation, restrictions on the foreign tax credit, and restrictions on tax treaty benefits).
- Tougher rules on, and closer scrutiny of, transfer prices between related parties—such as parent and subsidiary corporations.
- Increased complexity. Under the U.S. rules, businesses with significant foreign operations *cannot* prepare their tax returns properly without sophisticated computers.
- Enforcement policies that squeeze more tax out of an existing tax system.

On the other hand, the United States has not yet embraced a value added tax (VAT) or a national sales tax.

There are at the present time several important tax trends in the industrial countries, and the United States is in the forefront of several.

These are major sources of revenue in all the other industrial countries (except Japan) and in all U.S. states and many U.S. cities. Nor has the United States implemented relief from double taxation of corporate profits by integrating the taxation of corporations and shareholders—as a growing number of industrial countries are doing.

A final trend, to the great joy of non-U.S. multinationals, is the demise—or at least the scaling down—of worldwide unitary reporting. A few years ago about one-fourth of the U.S. states, most prominently California, used this system to compute a multinational's income.

Reduced Tax Rates

On January 1, 1988 the top U.S. individual rate went to 28% and the top corporate rate went to 34%—from 50% and 45% respectively two years ago.

The industrial countries are worried that the low individual rates in the United States will cause their best and brightest to emigrate. Some countries already have acted. Canada, where 95% of the population lives close enough to

watch American television, is lowering the top national rate to 29%, down from 34%. Australia has lowered its top rate to 49% (from 60%) and New Zealand has lowered its top rate to 48% (from 66%).

The United Kingdom was the trend setter in corporate rate reduction. It reduced its 50% rate to 35% in steps over three years. The 35% rate has been in force since 1986. The U.S. soon followed, the French have reduced their long-standing 50% rate to 42%, and the Dutch have reduced their rate to 42%. The Germans are studying rate reduction, although their rate is only 36% on profits that are distributed as dividends.

U.S. Corporate Taxes Set to Rise

The industrial countries that lowered their tax rates offset—or more than offset—the reduced rates with a broader tax base. The U.K. coupled its rate reduction with the removal of a major capital recovery program. This program had permitted new plant and equipment to be written off 100% the first year.

The U.S. went even farther. Despite lowering the corporate rate from 46% to 34%, U.S. business will pay an average of $25 billion a year *more* in income taxes in each of the next five years. The major reasons for this are (1) the elimination of the investment credit, (2) the lengthening of depreciation lives, and (3) making the foreign tax credit limitation more restrictive. Overall, the Tax Reform Act of 1986 was supposed to be tax neutral; that is, it was designed to generate the same amount of tax revenue as the tax system it replaced, albeit with some major shifts of impact (e.g., corporations pay $25 billion a year more and individuals pay $25 billion a year less).

The industrial countries that lowered their tax rates offset—or more than offset—the reduced rates with a broader tax base.

Corporate/Shareholder Integration

The industrial countries are moving toward the integration of corporate and individual income taxation. France, Germany and the United Kingdom have used this system for many years. More recently Canada, Italy, and Australia have joined the club.

Australia and Germany have full integration. An Australian corporation that has income of $100 pays a $49 income tax. If it pays the remaining $51 as a dividend, the Australian individual shareholder (1) reports $100 of income (the dividend is *grossed-up* to reflect the underlying corporate tax) and (2) gets the full $49 corporate tax as a credit against his individual tax liability. This is an *imputation* system, i.e., the corporate tax is imputed to the individual. Since the entire corporate tax can be credited and the top individual rate also is 49%, the dividend is, in effect, tax free to the individual.

Germany is an example of combining split rate and full imputation systems of integration. The German corporate tax rate is 56% on retained profits but only 36% on profits that are distributed as dividends. Like Australia, the German shareholder reports a grossed-up dividend and then gets the full 36% corporate tax as a credit against his or her personal income tax liability.

Countries such as Canada, France, Italy, and the United Kingdom have partial integration; that is, individuals can offset a *portion* of the underlying corporate tax on dividends against their personal income tax liabilities.

The United States has talked about integration since the early 1970s, but nothing has happened. A very small first step—giving corporations a 1% deduction for dividends paid, was proposed as part of the Tax Reform Act of 1986. But it fell in the search for revenue when the corporate and individual rates were lowered to 34% and 28% respectively.

Japan actually is going the other way—phasing out a lower rate on distributed profits as part of an overall lowering of both the corporate and individual rates. But corporate/shareholder integration, either through an imputation approach or a dividend deduction approach, is in the wind. Its long-term forward movement is certain.

A comparison of Australia and the United States illustrates the impact of integration. As noted, an Australian individual shareholder ends up with 51% in his or her pocket out of $100 of corporate profits. A U.S. shareholder of a U.S. corporation ends up with only $47.52 (34% tax on $100 = 66, less 28% of $66 ($18.48) = 47.52). This despite far lower corporate and individual rates.

Corporation Taxed Like a Partnership

The United States does let closely held corporations (35 or fewer *individual* resident shareholders) elect to forego tax at the corporate level and have all corporate income taxed at the individual shareholder level—whether or not the income is distributed as dividends. This treatment for "S corporations" essentially is how U.S. partnerships are taxed.

There is no likelihood, however, that the "S corporation" provisions will be significantly expanded. The U.S. Treasury currently is doing its best to deny partnership tax status to a new breed of partnership, some of which have thousands of partners and publicly traded partnership interests. These business vehicles are known as master limited partnerships.

Taxing the Income of Foreign Subsidiaries

Countries do not worry very much about fine-tuning the taxation of their domestic corporations' foreign-source income until they become major capital exporters. Following World War II, the United States vastly expanded its overseas investment, and in 1962 Congress enacted our Subpart F rules to combat perceived abuses. These rules, which achieved a new level of complexity, taxed currently the earnings of foreign subsidiaries that were deemed to be tax haven operations. Till then, no income of a foreign subsidiary was taxed to the parent until it was brought home. As Japan and the countries of Europe recovered from the war, foreign investment became more widespread—and so did tax haven legislation. Canada, France, the United King-

dom, Germany and Japan now have it. Conspicuous by its absence, at least so far, is Australia.

The Foreign Tax Credit: New Complexity

Most industrial countries tax the worldwide income of their resident individuals and corporations. The United States taxes the worldwide income of (1) individual citizens (wherever they are resident), (2) aliens who are resident in the U.S., and (3) corporations that are incorporated in the U.S. The U.S. does not have the concept of corporate residency, under which the United Kingdom and many Commonwealth countries tax the worldwide income of corporations managed and controlled within their borders.

Countries that tax worldwide income generally mitigate double taxation by granting a full credit for income taxes paid to foreign countries. The credit typically is limited. Under the per-item approach, the credit is limited to the tax paid on each item (or group of similar items within one country) of foreign income. Under the per-country approach, the credit on tax paid to any country is limited to the home country tax on income within that country. Thus credits are lost to the extent the foreign tax rate exceeds the home country rate. Under the overall approach, the total foreign tax credit is limited to the home country income tax on total foreign-source income. This method lets a corporation average the taxes of high- and low-rate countries.

The U.S. *professes* to have an overall limitation. But the limitation is computed separately on so many various baskets of income that it is overall in name only. There are ten separate income categories (or baskets) of income, for example, (1) passive income, such as portfolio dividends and royalties, (2) high withholding-tax interest, and (3) financial services income. In addition, the limitation on dividends from *each* non-controlled foreign corporation is computed separately—a per *company* limitation.

This limitation system has two effects. One is to reduce the ability to average foreign tax rates so that a foreign tax imposed at a rate higher than the 34% U.S. rate may still be creditable. The other effect is to make computing the foreign tax credit so complicated that a U.S.-based multinational *cannot* properly prepare its tax return without using sophisticated computer systems. In addition to the ten baskets already referred to, (1) the earnings and profits of each foreign subsidiary must be recomputed according to U.S. tax rules and (2) foreign-source income must be reduced to reflect U.S.-source expenses that are deemed to apply to foreign income. For example, (1) part of the parent company's interest expense and headquarters expense will offset foreign dividend income and (2) part of its R&D expense will offset royalty income.

The latest round of complications—the 1986 Tax Reform Act—stems from the Treasury's desire to end all avenues of tax avoidance in the foreign area.

The latest round of complications—the 1986 Tax Reform Act—stems from the Treasury's desire to end all avenues of tax avoidance in the foreign area. The result is (1) very little added tax revenue—this source has been squeezed too much before to provide a windfall—and (2) rules that are unconscionably complex.

President Reagan signs the Tax Reform Act of 1986.

As noted, U.S. tax haven legislation has spread to several other major countries. I hope, for the sake of keeping international commerce as uncomplicated as possible, that the other major trading countries do not follow the U.S.'s lead by complicating their tax systems to the point of diminishing returns. Aside from adding needlessly to the cost of preparing tax returns, complications—such as the United States now has—also lead to non-compliance.

More Expensive to Operate Abroad

The major reason why recent tax law changes have made it more expensive to operate abroad is the general policy of (1) broadening the tax base to maintain tax revenues while (2) lowering rates. Another reason is to plug loopholes that went unnoticed when a country's offshore operations were not significant.

But one group's loophole can be another's idea of sound tax policy. In the United States, labor and management often are divided on how offshore income should be taxed. More that their foreign counterparts, American labor unions feel that U.S. companies are exporting jobs when they manufacture overseas through runaway plants—two terms that illustrate both the articulateness and the passion of the lobbying effort. Thus there is more political pressure in the U.S. than elsewhere to make it expensive to operate abroad. Management counters with equally articulate, but less stirring arguments for tax neutrality and protecting overseas markets. Tax neutrality is a tax policy so devoid of bias that business decisions can be made without considering the tax effect. But tax neutrality also is in the eye of the beholder.

In any event, the trend is clear. Governments are tightening and changing the rules (1) to generate more tax revenue without increasing the rates and (2) to correct perceived abuses.

Much of the ground work for the Tax Reform Act of 1986 was done by the Treasury Department.

Australia dealt offshore activities a multiple blow this year. A system that virtually exempted foreign income from Australian tax was replaced by one that taxes worldwide income (with double taxation mitigated by a foreign tax credit). In doing this Australia was merely catching up with the rest of the world. But the new imputation system (discussed earlier) is structured so that Australian individual shareholders get no imputation credit for the foreign income taxes their corporations pay. In our earlier example, an Australian individual kept $51 of the $100 his corporation earned. If that $100 of income had been earned abroad and been subject to $49 of foreign income tax, our Australian shareholder would have kept only $26.

Also, in the past year Australia, New Zealand, the United Kingdom, and the United States have ended the tax advantage of dual resident companies (also called link companies) that let multinationals deduct acquisition interest expense in both the investor and investee country.

The United States also has negated (in 1984) the tax advantage of stapled stock, a technique still available in other countries, whereby the shares of the parent trade in tandem with the shares of a foreign corporation. When U.S. companies used the technique, the foreign company usually was a tax haven corporation through which offshore income could be accumulated without being subject to U.S. tax under the Subpart F rules already discussed. But with the new Australian tax rules, it seems likely that stapled stock will be used by Australian public companies to pay dividends to foreign shareholders from foreign subsidiaries, typically located in other industrial countries (rather than in tax havens). This will let these companies' profits bypass the harsh treatment now afforded highly-taxed foreign income received by Australian corporations when it is re-distributed to nonresident shareholders. Such structures are not tax dodges. They can in fact involve a dilution of parent company control. As multinationals increasingly become multinationally owned, such structures should be encouraged. The U.S. should revise its laws to permit it, and other countries should do nothing to restrict it.

The United States also has negated (in 1984) the tax advantage of stapled stock...

Transfer Pricing: A New Ballgame

The Revenue Departments of the world are well aware that multinational groups save taxes when companies in low-tax jurisdictions (1) sell to affiliates in high-tax jurisdictions at unrealistically high prices and/or (2) buy from them at unrealistically low prices. The tax laws of all countries let them adjust prices between related buyers and sellers to arm's length. But until recently the United States generally took a more aggressive enforcement stance in the transfer-pricing area than the other industrial countries.

Probably the most important development in the area is greater communication between Revenue Departments. This is done now on a bilateral basis between countries under the provisions of their various income tax treaties. This will expand if a proposed OECD multilateral exchange of information agreement is adopted. Under this arrangement, Revenue agents from the 24 member nations would be able to gather a wide range of information about multinationals and their operations. I do not object to governments getting the information they need to enforce their tax laws, but the OECD proposal could lead to obtaining unauthorized information, such as trade secrets and sensitive know-how.

The United States has been the leader in the policing of transfer pricing. But another development is that other countries recently have upgraded their enforcement to approach the U.S. level. Japan has new rules that closely follow those of the United States, which are detailed in the extreme. And a number of countries, including prominently the United Kingdom, The Netherlands, and Sweden, have increased the scope and sophistication of their examinations. In part, this increase is due to Revenue Agents from various countries attending training courses run by the U.S. Internal Revenue Service.

...until recently the United States generally took a more aggressive enforcement stance in the transfer-pricing area than the other industrial countries.

Another development, which could well be a trend, is that United States law now provides that the cost basis of items purchased from foreign affiliates for income tax purposes cannot exceed its customs value. It is hard to argue against the logic of such a requirement, and others no doubt will follow.

A less justified development is the United States' new "super royalty" provision, which lets the IRS adjust the transfer price of intangibles transferred to foreign affiliates to reflect the income the intangible generates—even though the price concededly was arm's length when the deal was made. In other words, the transaction remains open forever.

The U.S. Treasury convinced Congress that the provision was needed to keep American companies from transferring valuable intangibles abroad for an inadequate price. This

breach of the universally accepted rule that fair market value is determined using the facts known at the time of the transaction, is unfortunate and unjustified. Hopefully, it is not a trend.

Value-added Tax: Growing Acceptance

Overall, the industrial countries are rethinking tax policy—really attempting to decide which method is fairest and, at the same time, least distorts their economies. The visible trend is toward consumption taxes—particularly the value-added tax (VAT), and away from income taxes. It definitely is away from *complete* reliance on "direct" (i.e., income) taxation.

VAT is a tremendous source of revenue. The European Community has had VAT for many years. Australia has a national sales tax, but has gone no further on implementing proposals for a broader based consumption tax—for example a VAT. Japan's Government recently proposed a national sales tax—in connection with proposals to reduce the income tax— but it was controversial and was defeated. However, some form of indirect tax probably will be introduced in Japan in the next year or so.

I am sure that consumption taxes will be adopted nationally at some time in the future.

A national consumption tax has been suggested as a cure for the U.S. deficit, but a tax increase of any kind is not in the cards for the moment. Sales taxes are, however, major revenue producers for all U.S. states and most larger cities. I am sure that consumption taxes will be adopted nationally at some time in the future.

Ironically, one of the arguments used against VAT in the U.S. is that it is *too* effective. Many believe that our profligate politicians cannot be trusted with such a money machine. The other main criticism is that it is regressive—that is, it disproportionately affects the poor. Other countries have dealt with the latter concern by exempting items such as food and low-priced clothing.

Treaty Override: Another Unhealthy Trend

Another unhealthy trend, again with the U.S. in the fore, is disregard for treaty obligations. The Tax Reform Act of 1986 has provisions that override conflicting treaty obligations. U.S. Constitutional law provides that a later-enacted statute supersedes a conflicting treaty obligation, but the legislators can prevent this by indicating such intent during the enactment process.

The U.S. attitude will breed retaliation, and probably unleash a chain reaction of treaty overrides—aimed at the United States multinational community. We have had ample examples in another forum of what happens when treaties become mere scraps of paper.

Unitary Tax: A Pleasant Demise

Worldwide unitary reporting has become a reverse trend—hopefully ending in its demise. After over a decade

Senator Packwood (left) and Representative Rostenkowski (right), who spearheaded the Tax Reform Act through the Congress.

of lobbying, ill will, threats (including the U.K. threatening to break provisions of its income tax treaty with the U.S.), and economic pressure, the issue seems defused. A few years ago, some 12 U.S. states taxed multinational groups by allocating the group's worldwide income to the state on the basis of the ratios of property, sales, and payroll in the state to worldwide property, sales, and payroll. The system often produced far higher taxes than merely isolating the transactions in the state or allocating U.S. income by a formula. The latter method is called the water's edge approach.

Most of the smaller states have adopted a water's edge approach, and California permits—effective January 1, 1988—multinationals to elect to be taxed on a water's edge method—in return for a substantial fee. This is not a perfect solution, but it seems to have unruffled some feathers. In addition, a lower California court recently held that worldwide reporting by foreign multinationals was unconstitutional. This decision will be appealed, ultimately no doubt to the U.S. Supreme Court, so a final decision is years away.

...our tax code is evolving in the direction of a policy that will encourage the type of personal and corporate economic behavior that governments wish to bring about.

In the final analysis, we have made some progress away from the cynicism of Jean Baptiste Colbert's seventeenth century dictum that "the art of taxation consists in so plucking the goose as to get the most feathers with the least hissing." But not as much progress as one might hope for..

To be sure, our tax code is evolving in the direction of a policy that will encourage the type of personal and corporate economic behavior that governments wish to bring about. The industrial countries are moving toward the integration of corporate and individual income taxation. At the same time, they are also tightening and changing the rules in order to correct perceived abuses and generate more revenue without increasing the rates. Perhaps the most appealing trend at the current time is the fact that most major countries are rethinking some of the fundamental premises of long-standing tax policies in an effort to find a fairer method that least distorts their economies. One dares to hope that some sensible approaches will emerge from this process. ■

ZUSAMMENFASSUNG

Weltweite Entwicklungen in der Besteuerung

Zur Zeit gibt es einige wichtige Trends bei der Besteuerung in Industrielaendern. Die Vereinigten Staaten stehen dabei haeufig in vorderster Front.

- Reduzierte Einkommensteuern fuer Private und fuer Unternehmen.
- Eine breitere Besteuerungsgrundlage—Einbeziehung neuer Positionen beim Einkommen und weniger Abzugsmoeglichkeiten—fuer Private und Unternehmen.
- Bestimmungen, die wirtschaftliche Betaetigung im Ausland verteuern (Restriktionen bei Doppelbesteuerungsabkommen und bei der Anrechnung von auslaendischen Steuerzahlungen.).
- Haertere Regeln und genauere Pruefung der Austauschpreise von verbundenen Parteien—wie Mutter–und Tochtergesellschaften.
- Erhoehte Komplexitaet. Unter den US-Gesetzen koennen Gesellschaften mit bedeutenden Auslandsaktivitaeten ihre Steuererklaerungen nicht ohne komplizierte Computertechnik erstellen.
- Durchfuehrungsmassnahmen, die mehr aus den bestehenden Steuervorschriften herausholen.

Unsere Steuergesetze entwickeln sich entsprechend einer Politik, die einen bestimmten Typus von privaten und unternehmerischen Wirtschaftsverhaeltnissen foerdern will. Die Industriestaaten bewegen sich hin, zu einer Vereinheitlichung der Unternehmens- und Individualbesteuerung. Gleichzeitig aendern und verschaerfen sie die Gesetze, um so vorherige Missbraeuche abzustellen und hoehere Einnahmen zu erzielen , ohne die Steuersaetze zu erhoehen.

Der bedeutsamste Trend duerfte zur Zeit sein, dass die fuehrenden Laender die grundlegenden Praemissen ihrer langfristigen Steuerpolitik ueberdenken in einem Streben nach gerechteren Methoden, die ihre Wirtschaft weniger verzerren. Man darf auf einige vernuenftige Ansaetze, als Erfolg dieser Anstrengungen, hoffen. ❑

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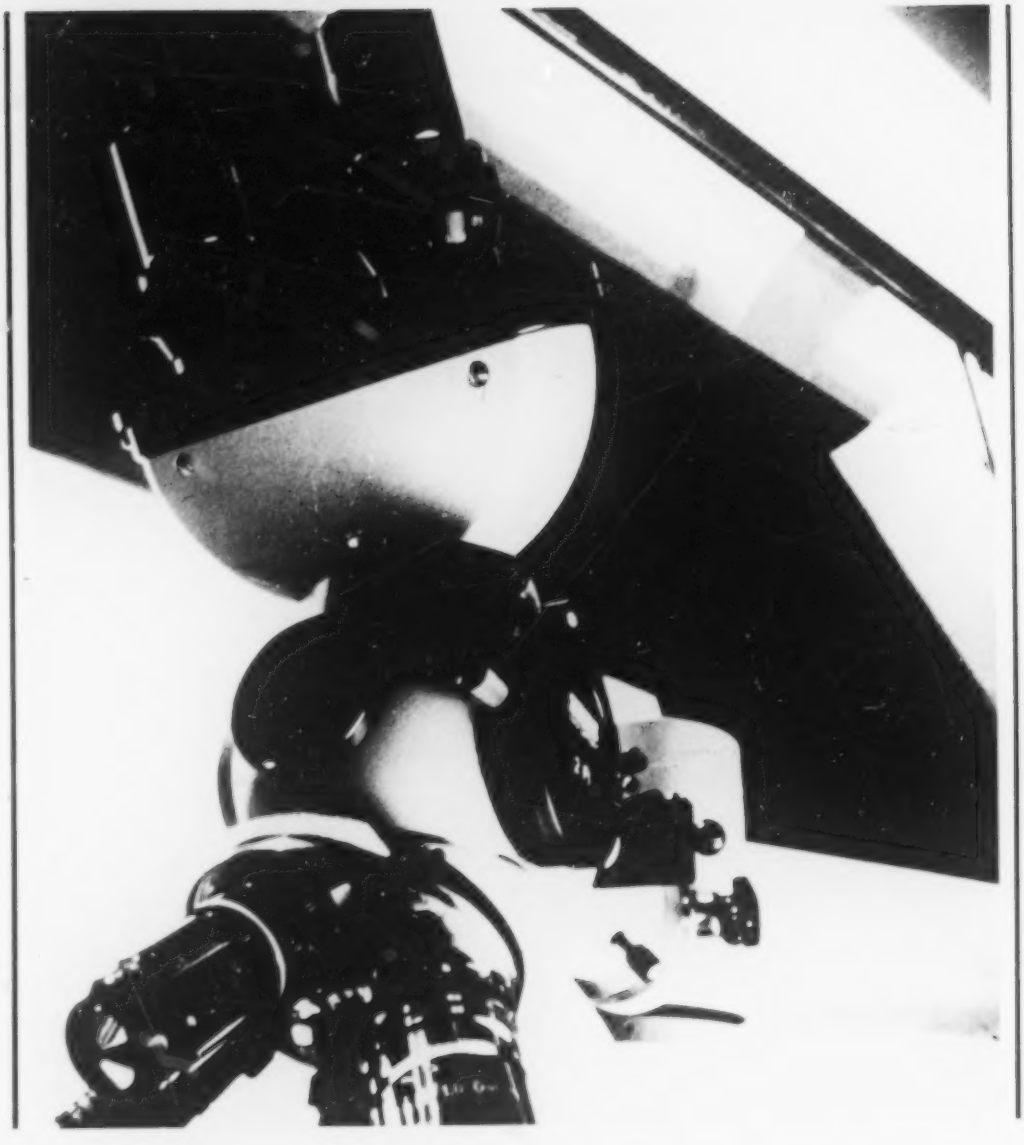

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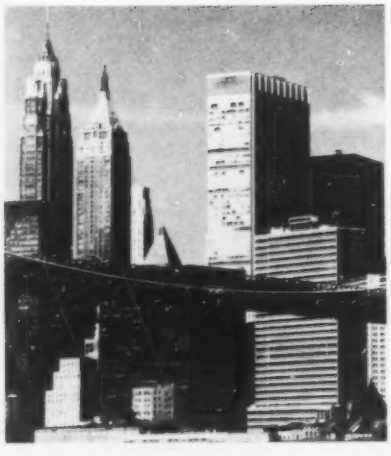

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Steuerreform—1990

German Tax Reform: The Emerging Profile

Dr. Hans Saur
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Like many of its predecessors, Germany's current administration is aiming to simplify the confusing German tax law. Based on international comparisons of the tax law and an analysis of its implications, many political parties, states (Laender), and, above all, academicians and economists have developed concepts which take social concerns and conditions into consideration as well.

The proposals for reform varied in accordance with their political origin. The differences arose then as now from the question: Are either of the two productive resources in the economy—capital and work—now taxed unfairly or unequally, and what priorities should be set in countering any unfairness?

Much to the regret of academicians, little consideration has been given for political reasons to rules and their consequences: proposed concepts were simply guided by opinions expressed in the media and reactions of public and private interest groups.

Background

Discussions have been characterized by propaganda, polemics and demagogy, rather than objectiveness, and resulted in commonplace slogans such as

- Cut back subsidies
- More jobs
- Lower excessive tax and social security burden for wage earners
- Budget discipline
- More free market economy, less government interference
- Eliminate underground economy (moonlighting)
- More honesty among taxpayers and greater fairness
- Comprehensive simplification.

Business and academic circles no longer considered it justifiable that business investments, which, after all, carry more risks than any, were subjected to a double tax on income (income or corporate income tax, as well as trade income tax), and double tax on their net worth (capital tax and trade capital tax), bringing their overall tax burden to up to 70%.

Based on international comparisons, it is argued that this anti-competitive, prohibitive tax burden also results from the capital tax levied on corporate assets, a tax that is charged by only three other countries—Luxemburg, Norway and Austria. Trade and similar taxes are only imposed by Japan, Luxemburg, Austria and by some U.S. states and Canada, albeit at a lower rate. Judging by the present status of negotiations between the coalition partners, not many of the concepts outlined above will be realized.

Putting Together a Package

The most hotly contested question, namely whether the top tax rate should be lowered or not, was resolved with a

"yes, but" compromise. Yes, it should be lowered, but only a little, and not without reducing the lowest tax rate as well. In order to come to a conclusion, the details of financing have been left open for the time being. Basically, the tax reform will be limited to changes of rates; it will be financed largely by raising tax bases, as well as by reductions of subsidies and tax privileges.

The tax relief package, on which the government agreed in the Spring, will amount to DM 44 billion. DM 7 billion of this sum will be generated from an increase in the basic deductible which will be raised by about DM 1,000 to around DM 5,600, respectively to DM 11,200 for a married couple.

In addition, the initial tax rate, i.e., the tax levied on the first mark of income above that basic deductible, will be reduced from 22 to 19%. Result: DM 6.7 billion less tax receipts.

The reduction of tax rates in the so-called progression zone, popularly called "flattening of the middle-class belly", accounts at DM 23.7 billion for more than half of the

Much to the regret of academicians, little consideration has been given for political reasons to rules and their consequences.

overall tax reduction. Those with high incomes are most favorably affected by this measure, that is, individuals who earn around DM 70,000, or couples with an income of about DM 140,000.

The cut of the top tax rate from 56 to 53% will reduce revenues by DM 1 billion, benefitting those earning more that DM 120,000, or, if married, more than DM 240,000 a year. Another DM 3.4 billion will benefit corporations, mainly by a reduction in the corporate income tax, probably from presently 56% (on retained earnings) to 50%.

The effect on overall revenues of the above-cited tax breaks is only partially neutral. DM 25 billion are to benefit taxpayers directly as a true tax relief; DM 19 billion of the overall reform package of DM 44 billion will therefore have to be financed from different sources. Apparently the coalition partners in the federal government have largely agreed

The cut of the top tax rate from 56 to 53 percent will reduce revenues by DM 1 billion.

on this question. The corporate sector is therefore faced with the following cuts:

Special depreciation for research and development, as well as for capital expenditures for energy efficiencies and environmental protection are no longer allowed (DM 2 billion).

In the opinion of the Federal Minister of Finance this is possible, because the depreciation allowances for buildings were increased by DM 4 billion a year in 1985. In the area of environmental protection the "polluter pays principle" has in the meantime been enforced to such an extent that special depreciation as a financing tool is no longer needed.

Regional investment subsidies are abolished (DM 1.6 billion), except for Berlin, where they are, however, reduced by 10% (added tax receipts: DM 400 million). These subsidies have allegedly been much abused, especially by utilities. Parallel to this elimination of investment subsidies, the federal government and states are increasing funds for the improvement of regional economies by a total of DM 500 million per year. At least 30% of these funds should be earmarked for areas bordering the German Democratic Republic, where, incidentally, special depreciation is to be retained. Additionally, within the framework of the Berlin promotion programs, a cutback in the preferential treatment, particularly for companies as well as for residential building, is planned to the tune of DM 800 million.

Consumers, i.e., the man on the street, will be subject to a 10% withholding tax on all interest income.

Thorny Problems Still Ahead

However, policy makers are still faced with the most difficult part of the tax reform: the reduction of subsidies. Almost nowhere are the risks inherent to an economic policy that tries to satisfy everybody as apparent as when it comes to defending tax advantages and government subsidies. Everybody is quick to point out where to best cut back for everybody else—but nobody is willing to give up his own advantages.

As early as in 1989 the total value adjustments claimed by credit institutions, presently in the aggregate amount of roughly DM 8 billion, will begin to be reduced to such an extent as to produce added revenues of approximately DM 550 million.

The following measures are also being discussed:

- The establishment of reserves for anniversary bonuses, required under a BFH (Federal Finance Court) decision, will not be admitted in one lump sum, but in several increments over a period of several years (DM 500 million).
- The elimination of the write-up of imports (DM 50 million).

Tax reform proposals will have to survive debate in the Bundestag.

- Up to now, it was possible under certain conditions to transfer hidden reserves, which accrued when assets were sold, to certain replacement assets. Originally intended for the real estate market, then extended to other economic assets, this measure was intended to strengthen the mobility and profitability of the economy. For example, taxation should not prevent an exchange of real estate which makes economic sense. This tax-exempt transfer possibility, which for years has been restricted to 80%, is now to be reduced to 50%.
- The share an individual must pay for using a company car privately will be increased from 20/25% to 30/35% (DM 100 million). However, individual users can prove that the portion of their private use is lower.
- Only 80% of business entertainment expenses can be claimed.
- An interest payment of probably 6%, or an interest rate which varies according to the economy, will be levied on taxes owed in excess of DM 5,000 after a period of 15 months. Refunds by the internal revenue service (Finanzamt) to the taxpayer will bear interest without restrictions. These interest payments will most probably affect private taxpayers as well, not just corporations.
- The tax-free deductible for free-lance professionals of DM 1,200 *per annum* will be eliminated (DM 140 million).
- Tax benefits for agriculture are to be examined by a special task force.

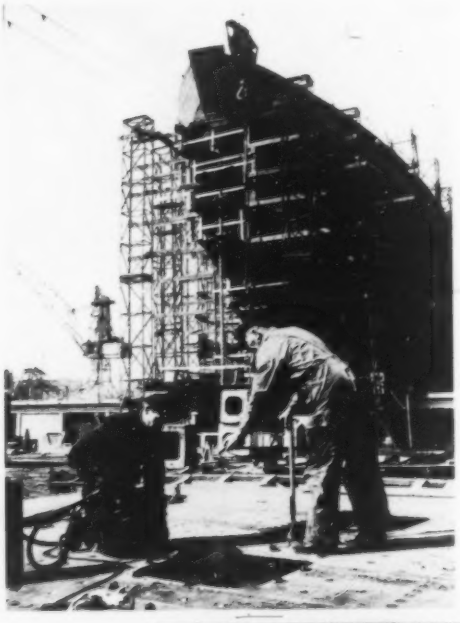
Thus, according to the assessments of the Department of Finance, between DM 3.5 billion and DM 4 billion will be collected from the corporate sector.

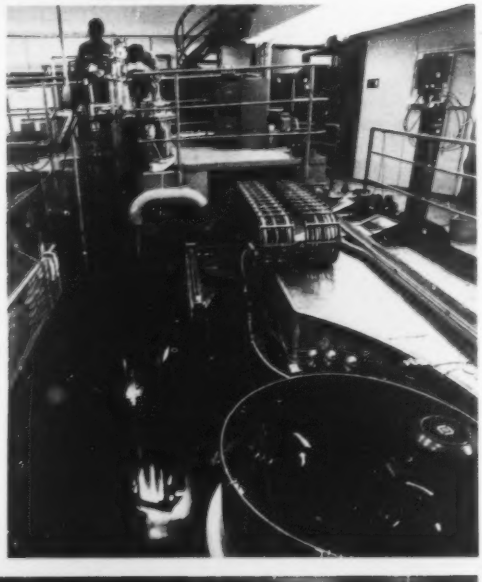
The planned restriction of taxes on extraordinary income, which up to now has only been assessed at half the tax rate (Para. 34, German Income Tax Law, (EStG) affects the area between the corporate and private sector. Extraordinary income is essentially remuneration paid as compensation for loss of income (settlements), in particular, so-called surrender earnings, which occur when companies or large interests in companies are sold. The reason behind this particular tax advantage is the fact that in such situations hidden reserves, which were formed in the course of many years, are being realized within one year and are therefore not applied fully for tax purposes.

Policymakers are still faced with the most difficult part of the tax reform: the reduction of subsidies.

It should also be noted that the above-cited advantages, which are now to be curtailed, also include persons with limited tax liability under Para. 50, EStG, because they apply to profits from the sale of an agricultural enterprise, a commercial enterprise, and important interest in such or capital gains from the sale of a professional office.

About DM 3.5 billion are to be realized by taxes on wages. The remaining DM 10 billion do not affect any specific sociological group.





The final package will probably affect subsidies to industries such as shipbuilding (top) and steel (bottom); special depreciation for R & D (middle) will be cut.

The Hand in Your Pocket

The government coalition has agreed on the following measures:

- The DM 480 employee allowance, the DM 600 Christmas allowance and the lump-sum deduction for income-connected expenses in the amount of DM 564 will be combined into an employee allowance of DM 1,644 (A disadvantage for everybody spending more than DM 564, but less than DM 1,644, for income-related expenses.) According to the Department of Finance, the governing parties were able to agree on this point, after increasing at the same time the flat mileage rate allowance for commuting in privately-owned vehicles from 36 Pfennig to 50 Pfennig. Most deductions above those for income-related expenses were claimed for such trips. As a result of the new rate for the allowance, the government will receive an additional DM 2.6 billion, and lose DM 1.4 billion due to the increase in the flat mileage rate allowance; on balance the government will net DM 1.2 billion.
- Employee discounts, as offered in certain industries (discounts on cars, beer, flights, etc.), can now be deducted up to DM 2,400 per annum. Any pecuniary advantages in excess of this amount are subject to tax. The exemption limit for tips is going to be doubled to DM 2,400.
- The DM 1.50 deduction for meals will either be eliminated altogether or replaced by an alternative plan. In any case, the Finance Department is counting on added revenues of DM 1 billion.
- Bonuses for Sunday, holiday or night work, determined by law or labor negotiations, which up to now had been tax-exempt, will now be subject to limited taxation, just like any intercompany agreements beyond legal or labor negotiations. (Added receipts: around DM 400 million).
- The real property tax relief, presently benefitting newly-created housing for ten years (Para. 92a, *et seq.*., Second Housing Law), will most probably be eliminated. The Minister of Finance cited as the reason for this cutback the extremely high price and rent stability prevailing at the present time. Details are still to be worked out. It would mean added revenues for the communities of approximately DM 100 million, or a total of about DM 1 billion in the course of ten years. To compensate for this measure, an increase in the *housing allowance* for owner-used houses from DM

Employee discounts, as offered in certain industries (discounts on cars, beer, flights, etc.) can now be deducted up to DM 2,400 per annum.

Refunds by the internal revenue service (Finanzamt) to the taxpayer will bear interest without restrictions.

600 to DM 900 will be provided in the new tax law.
- The 10% lump-sum taxation of part-time work and direct insurance plans will be raised to 15% for both. The tax-free treatment of voluntary social contributions by employers of up to DM 312 will cease to exist.
- Rooms used at home for work can only be claimed for tax purposes at a flat amount of DM 800 annually.
- The old age exemption of DM 720, respectively DM 1,440 pursuant to Para. 32, Sect. 8, EStG, will be canceled (DM 420 million). The old age relief pursuant to Para. 24a, EStG (tax exemption for income of up to DM 3,000 annually for wage-earners who have reached the age of 64), will, however, be retained, as well as the provisions of Para. 19, Sect. 2 EStG (tax exemption for pensions and related benefits up to DM 4,800 annually).
- Apparently no final decision has been made on the elimination of the lump-sum deduction provided in Para. 10c, Sect. 1, EStG (alimony payments, church tax, tax preparation expenses, etc.) of DM 270, respectively DM 540, nor on the reduction by 50% of the deductibility of contributions paid to savings and loan associations within the framework of extraordinary expenses.
- The agreements reached between the coalition partners provide for a concentration of the so-called "DM 936-Law" (tax-free savings contribution to employees) on saving plans for building purposes and savings through ownership acquisitions in companies. However, since the government also intends to abolish the advantages of participating certificates, the savings will be far more than DM 500 million.
- Of particular importance for employees are the discussions on whether more wage compensation benefits, such as sick pay, government workmen's compensation insurance and education allowance, should be included into the progression clause (anticipated savings: DM 200 million).

The largest contribution, roughly DM 4.5 billion, is expected from the area of consumer savings through levying a 10% withholding tax on all interest income—with the exception of savings accounts with a legal, i.e., three-month

...the federal government and states are increasing funds for the improvement of regional economies by a total of DM 500 million per year.

term of notice, including, however, additional interest earnings from life insurance. It is interesting to note, that this withholding tax does not constitute a new tax, but a more efficient taxation of investment income, which has always been subject to taxation. In view of an increasing property level and rising interest income in the population,

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the government can no longer afford not to tax such forms of income. It should also not be ignored that substantial efforts were made to eliminate the so-called bank decree, which guarantees the anonymity of interest payments. The introduction of the withholding tax maintains this bank decree in its present form.

Credit institutions have to pay withholding tax in a lump-sum and without identifying the source to the internal revenue service. That means, that in the future, too, *spying* will be excluded. The anonymity of the *transaction* remains secure.

Incidentally, pursuant to the regulations of the double-taxation treaty, foreigners may opt to have withholding tax payments reimbursed, if they pay taxes on that income in their country of origin. The 25% withholding tax on distributions of profits (tax on investment income) remains intact, because otherwise the entire structure of the double-taxation treaty would be endangered. However, in the final analysis, any profit distribution will be therefore taxed at 52%, while retained earnings by companies will be subject to a 50% corporation tax. This situation is regarded as less than ideal. However, it must be kept in mind that the top income tax rate will be 53%.

To repeat: While credit institutions will be obligated to pay withholding tax on interest income, they will not have to give the internal revenue service any additional information: on the contrary, as heretofore, they are not allowed to do so.

Even though banks and life insurance companies are to pay withholding tax in one lump-sum without identifying the source to the internal revenue service, each taxpayer is entitled to demand a receipt on the 10% withholding tax deduction for him to claim this tax in his income tax declaration. Savers with lower income may be exempted from the withholding tax by presenting a non-assessment confirmation.

The one question that seems to remain open is whether and how the 10% withholding tax shall be retained and paid, if an interest payment does not involve a bank or insurance company, for example, if interest is paid within a corporation, i.e., between a parent company and an affiliate, abroad or at home. That same lack of clarity applies also to cases in which private parties grant loans to each other and receive interest. After agreement was reached between the governing coalition partners, the states (Laender) and political parties are now trying to voice their opinions.

In summary it can be said that extensive calculations are underway at all levels of government, be it federal, state or communities, to determine haw these cuts benefit the government and at what cost to the general public. The resulting concepts then have to be translated into bills, subsequently to be discussed by the Upper and Lower House of Parliament (Bundesrat and Bundestag)—a hurdle which has frustrated many a new idea. Undoubtedly these proposals for change will be altered many times. The German tax reform isn't law yet. ■

ZUSSAMMENFASSUNG

Steuerreform —1990

Mehrere Bundesregierungen sind unter der Zielvorstellung angetreten, das unuebersichtliche deutsche Steuerrecht zu entwirren, so auch die jetzige.

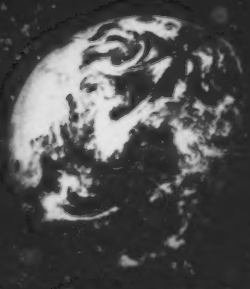
Die Reformvorschlaege waren, je nach der politischen Richtung aus der sie kamen, unterschiedlicher Natur. Differenzen lagen und liegen in der Frage, welche der beiden volkswirtschaftlichen Produktivfaktoren Kapital und Arbeit, jetzt ungerecht oder ungleich besteuert werden und wie dem begegnet werden kann.

Wirtschaft und Wissenschaft erschien es nicht weiter vertretbar, dass die gewerblichen Investoren, die von allen das groesste Risiko tragen, zweimal zu Ertragssteuern (Einkommen oder Koerperschaftsteuer und Gewerbekapitalsteuer) herangezogen werden, wobei die sich ergebende Gesamtbelastung bis zu 70% betraegt.

Die Steuerreform wird sich im wesentlichen auf die Tarife beschraenken; zur Finanzierung wird hauptsaechlich eine Erhoehung der Steuerbemessungsgrundlagen, der Abbau von Subventionen und Steuerverguenstigungen verwandt.

Das schwierigste Stueck der Steuerreform steht den Politikern allerdings noch bevor, der Subventionsabbau.

Nach der Einigung der Koalitionsparteien in der Bundesregierung haben sich schon die Bundeslaender und Parteien zu Wort gemeldet, die nicht mit allen Vorstellungen einverstanden sind. Deshalb—die Kuerzungsvorschlaege koennen sich noch aendern—noch steht die Steuerreform nicht im Bundesgesetzblatt. ❑



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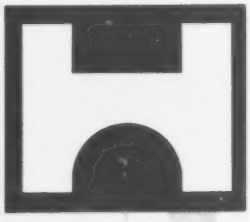

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Berlin ist fit

The Selling of Berlin

Wolf J. Frankl
Director — North America
Berlin Economic Development
Corporation

For a place that is one of Europe's largest industrial cities, with a population of two million, a GNP almost half that of Denmark or Austria, and an economy that is an integral part of the Common Market, West Berlin still has to work hard to sell itself to the international business community. Born largely out of ignorance, misinformation, and the memory of the events that engulfed the former German capital after World War II—the division of the city, the Airlift, the infamous Wall, and the chicanery occasionally experienced in the 1950s and '60s regarding transport into and out of the city—a negative image has perpetuated itself even into the 1980s.

What is being done to dispel this negative image and promote the city in terms of economic growth, political relationships, cultural and tourist activities? How, indeed, is Berlin being sold in the Western world as a viable metropolis?

The Geo-Political Situation

Berlin, of course, is a divided city in a divided country. Two cities, in fact, with a combined population of three million people—all true Berliners, 1.1 million in the East, 1.9 million in the West, all speaking Berlinerisch and joined by a common heritage. The Wall, which went up in 1961 to stem the drain of East Germans to the West, separates the former Russian Zone of Berlin from the British, French and American zones.

East Berlin has *de facto* become the capital of the German Democratic Republic, although *de jure* it is still the Russian occupation zone of Berlin. The three western zones have become West Berlin, a major city with its own government and a state of the Federal Republic of Germany. The continued occupation status is reflected by the presence of garrisons of the three Western powers in whose top commanders the ultimate authority in the city resides. The erstwhile occupying powers have become the protecting powers and the friends of West Berlin.

West Berlin is governed by a freely elected parliament, the Senate. Its members elect the Governing Mayor and the sixteen department heads called Senators. The Federal Republic secures West Berlin's economic and financial

Economically, West Berlin is an integral part of West Germany's economic system and, ipso facto, a member of the European Community.

stability. Although the delegates sent by West Berlin to the Federal Parliament in Bonn are, by virtue of the city's special status, not allowed to vote, every law enacted in Bonn is virtually automatically re-enacted by the Berlin Senate. Economically, West Berlin is an integral part of West Germany's economic system and, *ipso facto*, a member of the European Community.

Berlin's International Conference Center is the most modern facility of its type in Europe.

The Four Power Agreement of 1971 between the WW II Allied Powers regulates the rights and duties of the four powers in Berlin and governs access and egress to both parts of Berlin, via the transit routes and across the Wall. With this agreement, conditions in Berlin have become normalized. Its existence and the strict adherence by all parties to its provisions, has enabled West Berlin to achieve a renaissance on many fronts which is truly remarkable.

Nevertheless, Berlin operates under the handicap of its *island location* and a degree of political uncertainty that require special efforts.

The Economic Picture

With a workforce of some 850,000, West Berlin is a thriving industrial and commercial center. High technology, especially electronic and electrical companies lead the city's industrial establishment, followed by food processing,

...the Berlin government offers a bouquet of financial incentives which...can result in a bottom line unattainable elsewhere in the Common Market.

mechanical engineering, printing, clothing and chemicals. Major companies include Siemens, AEG, Nixdorf, Bosch, SEL, Schindler and Nestle. Over thirty American companies are represented in West Berlin, accounting for roughly 10 percent of the city's GNP. Among them are Ford, IBM, United Technologies (Otis), Gillette, NCR, Bally, ITT, Ball, Emerson Electric, Warner-Lambert and Philip Morris. Some of these companies have been in Berlin for many years, others are more recent arrivals. IBM looks back to over fifty years in Berlin; Otis is the result of a merger of two companies who started up in Berlin in 1879 and 1911, respectively.

In addition to is industrial establishment, Berlin disposes of an outstanding educational and R&D infrastructure. With three universities (93,000 students) and close to 190 scientific institutes (11 percent of West Germany's R&D workforce with only 3 percent of the total German population) Berlin enjoys an outstanding reputation for excellence which contributes significantly to its economic life and the influx of new companies.

Yet it takes more that infrastructure, recreational and cultural facilities and the proverbial Berliner Luft to attract job creating companies.

In order to overcome the real, and often only perceived location disadvantages, the Berlin government offers a bouquet of financial incentives which, particularly for a capital-

In the past nine years, BEDC has been able to attract 425 companies to Berlin, accounting for an investment of DM 1.7 billion ($930 million) and 10,000 new jobs.

intensive, high-technology company, can result in a bottom line unattainable elsewhere in the Common Market. Studies prepared by Arthur Andersen & Company and by the Brussels-based consulting firm Plant Location International attest to this statement. Among the key features of this package are tax-free investment grants averaging 20-25% of expenditures for buildings and machinery and equipment, low-interest long-term loans, substantially reduced corporate and personal income taxes, and special depreciation provisions. For example, if investors desire, they can write off 75% of the initial investment in year one. These balance sheet and cash-flow aids enable an investor to start an operation in Berlin with a minimum of equity.

The Selling of Berlin

The best of products rarely sells itself, even at bargain basement prices. It needs a selling organization, a promotional program and a good "service" or advisory follow-up to keep up its reputation and engender more sales.

Berlin's excellent infrastructure, its rich spectrum of supplier industries and services, its skilled and highly produc-

The Berlin Philharmonic is but one of Berlin's cultural jewels.

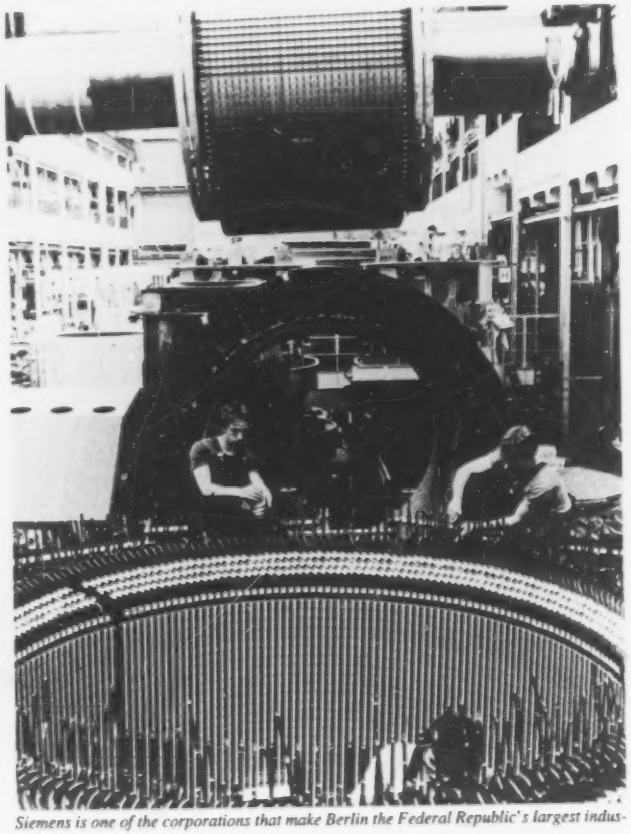
tive—there are no strikes in West Berlin—workforce, together with the aforementioned financial incentives, are marketed by the Berlin Economic Development Corporation. Created by the Berlin Senate nine years ago as a private company, BEDC, though financed from the public purse, is staffed by experts recruited from the private sector. This was done in the clear recognition that it takes people trained in business to talk to people in industry and commerce. Headquartered in Berlin, BEDC consists of 100 professionals, i.e. functional and industry experts, and a support staff of 100.

In the United States, BDEC has been active since 1978, resident since 1980, with offices currently in New York, Boston, Atlanta and San Francisco.

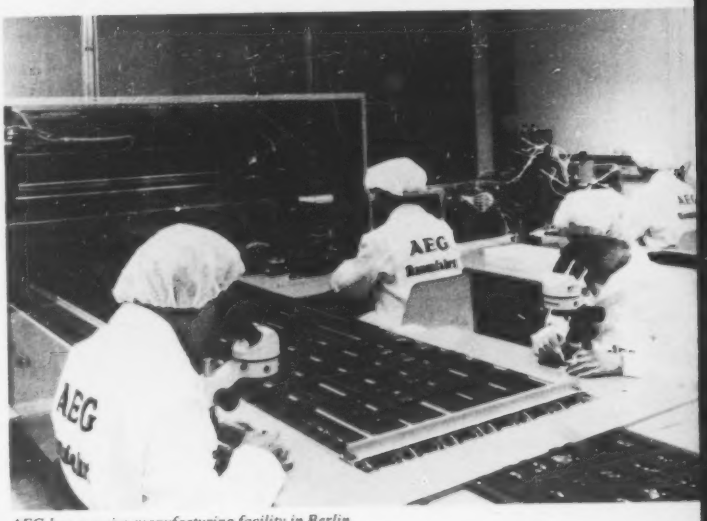
...it is a laborious effort, especially outside Germany, both because of the needle-in-the-haystack problem and the prejudices and misconceptions regarding Berlin.

In the past nine years, BEDC has been able to attract 425 companies to Berlin, accounting for an investment of DM 1.7 billion ($930 million) and 10,000 new jobs. The great majority consisted of small and medium-sized companies and new ventures.

The techniques employed in finding, courting and eventually convincing companies for which a Berlin operation makes sense comprise the salesman's traditional tools of



Siemens is one of the corporations that make Berlin the Federal Republic's largest industrial city.



AEG has a major manufacturing facility in Berlin.

direct calls, advertising, seminars, direct mail, use of the so-called multipliers, networking, etc. Needless to say, it is a laborious effort, especially outside Germany, both because of the needle-in-the-haystack problem and the prejudices and misconceptions regarding Berlin.

And yet, once an American industrialist is exposed to Berlin, sees it pulsating life and its prospering industrial establishment and talks with the managers of U.S. affiliates there, the reaction is universally positive. In the words of one visitor who followed an invitation which Berlin's Governing Mayor, Eberhard Diepgen, had extended to a group of American executives: "Berlin must be seen to be believed."

In addition to bringing in and assisting new companies, BEDC's activities also include advisory services to existing companies with special problems. Free advice is also rendered to companies desirous of expanding their activities in Berlin. In the latter two categories, BEDC takes credit for saving 3400 existing jobs and adding 5500 new jobs, respectively, with a total incremental investment of $910 million.

The selling of Berlin extends beyond the economic sphere to the world of conferences, trade fairs and tourism. With the International Conference Center (ICC), Berlin disposes of Europe's most modern facility of its type, capable of accommodating 10,000 participants at one function. In September 1988 the ICC will hold the IMF/World Bank meeting, which every third year is held in a city other that

With the International Conference Center (ICC), Berlin disposes of Europe's most modern facility of its type, capable of accommodating 10,000 participants at one function.

Washington, D.C. The adjacent Exhibition Grounds accommodate the annual Radio and Television Fair, International Green Week, the Tourist Industry Convention, and other events.

A Berlin-based marketing organization with a sales office

The Europe Center in mid-town Berlin.

in Washington, D.C. (henceforth in Chicago, Illinois) keeps up an unrelenting effort to attract functions to Berlin. Bookings range well into the Nineties.

Into the sphere of meetings and fairs in Berlin falls a thought planted by President Reagan during his June 1987 visit to Berlin in honor of the city's 750th Anniversary: Why not schedule the Olympic Games (1996 or 2000?) in Berlin, perhaps both Berlins...? Shades of 1936 and Jesse Owens...

On the tourist front, Berlin has been touting its attractions for many years. First in West Germany under the well-known slogan *Berlin ist eine Reise Wert*, and more recently in other countries, notably in North America.

The 750th Anniversary, with its rich and varied program extending from May through November, presented a golden opportunity to publicize the city. And indeed, following a special promotional campaign directed toward the travel agency industry, about 25 percent more Americans came to Berlin in 1987 than in the prior year.

...following a special promotional campaign directed toward the travel agency industry, about 25 percent more Americans came to Berlin in 1987 than in the prior year.

Tourists, conference participants and fair goers not only help spread the word about Berlin's attractions, they also contribute to the city's economic life in terms of expenditures in hotels, restaurants and stores. In this context, few Berlin visitors fail to find their way to Berlin's renowned department store, the KDW, an institution which does not have to shy away from any comparison with Harrods or Printemps.

With glasnost on the horizon, there is every expectation that Berlin's special problems will recede further into the background. Eventually even the Wall may disappear. The selling of Berlin will then take place on a level more readily comparable to the promotional efforts put forward by any other major European city. ■

ZUSAMMENFASSUNG

Berlin ist fit

West-Berlin mit 2 Mio Einwohnern hat ein Bruttosozialprodukt, das halb so gross ist wie das von Daenemark oder Oesterreich. Obwohl es eng in den europaeischen Markt eingebunden ist, hat es trotz allem grosse Schwierigkeiten, sich in der internationalen Geschaeftswelt zu behaupten. In Anbetracht der Auswirkungen des 2. Weltkrieges, insbesondere der Teilung der Stadt, der Luftbruecke, der beruechtigten Mauer, und der Transportschwierigkeiten von und nach Berlin, hat es die fruehere Hauptstadt auch heute noch sehr schwer, das ihr anhaftende negative Image im Hinblick auf oekonomische, politische, kulturelle und touristische Aktivititaeten aufzumoebeln.

Berlin als geteilte Stadt in einem geteilten Land mit 1,1 Mio Berlinern im Osten und 1,9 Mio im Westen, ist im Osten Hauptstadt und im Westen als eigenstaendiges Bundesland eine Grossstadt mit eigener Regierung. Berlin zeichnet sich als aufstrebendes Industrie- und Handelszentrum durch ein hohes technisches Niveau aus. Es sind dort vor allem Grossfirmen wie Siemens, AEG, Nixdorf, Bosch, SEC, Schindler und Nestle ansaessig. Ueber 30 amerikanische Firmen erwirtschaften in Berlin nahezu 10% des gesamten Bruttosozialprodukts. Darunter sind so bekannte Firmen wie Ford, IBM, United Technologies, Gillette, NCR, Bally, Ball, Emerson Electric, Warner Lambert und Philip Morris.

Auch auf dem bildungspolitischen Sektor hat Berlin einiges vorzuweisen. Es gibt dort 3 Universitaeten und nahezu 190 wissenschaftliche Institute. Trotzdem bedarf es mehr als der "Berliner Luft", um Firmen dorthin zu locken.

Mit Hilfe von BECD (= Berlin Economic Development Corp.), einer privaten Wirtschaftsentwicklungshilfegesellschaft, die vor 9 Jahren vom Berliner Senat ins Leben gerufen wurde, ist es gelungen, inzwischen 4425 Unternehmen nach Berlin zu holen. Dabei handelt es sich insbesondere um kleinere und mittlere Unternehmen, die Investitionen von 930 Mio Dollar taetigten und 10000 neue Arbeitsplaetze schafften. Dies ist vor allem moeglich in Anbetracht der finanziellen Anreize, die den Firmen angeboten werden. Hinzu kommt die ausgezeichnete Infrastruktur mit einem grossen Spektrum an Zuliefererindustrie und Dienstleistungsunternehmen. Berlin ist darueber hinaus aeusserst produktiv—es gibt keine Streiks dort. Berlin ist auch touristisch gesehen eine Attraktion. Unter dem Motto "Berlin ist eine Reise wert" findet es auch in Nordamerika Beachtung. ❑

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Company Profiles

PROFILES

AEG

AEG Aktiengesellschaft is an advanced technology company specializing in electrical and electronic equipment, systems and installations for automation, communication, information, for the office and the home. A Daimler-Benz affiliate, AEG is worldwide, active in 110 countries through a network of over 90 subsidiaries and affiliated companies. The foreign companies assist in AEG's worldwide endeavors by contributing engineering expertise, complete facilities, systems and components, commissioning and service.

AEG has over 78,000 employees and world wide annual sales of nearly $5.6 billion. Over 7,000 employees are involved in Reasearch & Development. Approximately $450 million in annual R & D expenditures are contributed to AEG's technological future.

Manufacturing facilities in 40 West German cities and 12 other countries provide modern technical products which AEG successfully markets internationally.

AEG Corporation, Somerville, NJ is AEG's U.S. headquarters. Olympia USA, also in Somerville, NJ controls the U.S. office equipment division, and AEG Power Tool Corporation, New London, CT heads U.S. power tool operations. AEG recently acquired MODCOMP, Ft. Lauderdale, FL as part of its international computer division and Magnetic Transit of America (MTA), Los Angeles, CA to complement AEG's expertise in advanced railway systems. Several smaller companies support AEG's U.S. sales activities in the areas of vibration technology, material handling, light fixtures, low voltage and high voltage switchgear and controls. □

AMK Berlin

For the Berlin-based organizers of trade fairs and congresses, AMK BERLIN, the company's events in 1987 presented a very positive picture, with extremely encouraging results at the major international trade fairs. With over 450,000 visitors the International Green Week Berlin, the exhibition for agriculture, horticulture and the food industry, was a major success. Over 55,000 trade visitors took advantage of the *Green Week* as an important element of their commercial activities in the agricultural and food sectors, and as an information forum. In addition to the attractive joint national displays featuring produce and specialities from all five continents, the fascinating special shows and some 150 meetings, seminars and conferences covered a wide range of subjects in the specialist supporting program.

Once again this year the world's largest specialist fair for the tourism and travel industry, the International Tourism Exchange ITB Berlin, occupied all 25 halls on the Berlin Exhibition Grounds. A total of 2,419 exhibitors and 84 additionally represented firms and organizations attended the ITB Berlin 1987. Travel trade professionals from all over the world consider this fair as an invitation to engage in a dialog about current problems and issues concerning the international tourism trade. The main focus of attention is on vacation and recreational travel, educational trips and travel by those seeking convalescence and recuperation, bus tourism, business travel and the special area of incentive travel.

The highlight of the year was the International Audio and Video Fair Berlin, the world fair for consumer and communication electronics. The trade regards the International Audio and Video Fair as the leading venue in Europe when it comes to placing orders. A total of 410,000 visitors, of whom more that 10 percent were trade visitors, inspected the latest technical achievements and new technology. The active involvement of the radio and television networks and of private sector broadcasting companies regularly ensures that the Audio and Video Fair is a media event of the very first order.

This year the Overseas Import Fair celebrated its 25th anniversary. This international trade fair provides a link between industrialized and developing nations. It assists the developing countries in gaining access to the European market and in their general integration in world trade. Business at this year's fair was brisk, reflecting good economic conditions resulting from a continuous increase in demand for consumer goods and influenced in addition by the continued low value of the US dollar, which favors purchases of goods from overseas countries.

The fall program for AMK Berlin included a number of national and international events, and is rounded off, as in previous years, by ANTIQUA, the sales exhibition for art and antiques. This particular event has over the years acquired a nationwide reputation.

The International Congress Center Berlin (ICC Berlin) gives the city a leading role in the international congress sector. Once again the picture was dominated by a number of major international congresses in 1987. These included the World Dermatologists' Congress with 8,000 participants from more than 60 countries, and the International Botanists' Congress, which attracted over 6,000 attendees. In addition some 400 national or international congresses, meeting, seminars, annual general meetings and product presentations ensured a full house. On average the ICC Berlin was booked to 75 percent of capacity, a record that few other venues in the world can match.

If you want to know more about events around the Berlin Radio Tower, please get in touch with:

AMK Berlin
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Chicago, IL 60601
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□

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Since its founding in 1913, Arthur Andersen's guiding principle has been the assurance that all partners have a similar interest in servicing the firm's clients everywhere in the world. In keeping with this tradition, in 1978, the firm created a Societe Cooperative, domiciled in Geneva, Switzerland, to coordinate worldwide services. This Societe Cooperative, which is controlled by all partners in the national practice entities throughout the world, facilitates consistently high quality client services in terms of professional practices and standards.

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1967 1987 ACL

ATLANTIC CONTAINER LINE is an international ocean carrier formed by six European shipping companies in 1965 to provide a through transport service between Europe and North America. The first sailing of this new Roll-on/Roll-off Containership operation took place in September 1967.

Three Swedish companies, Wallenius (the world's largest car carrier), Swedish American Line and Transatlantic Steamship Company, plus Holland-America Line, of Rotterdam, were the founders. They later were joined by the French Compagnie Generale Maritime and the British Cunard Steam-Ship Company, PLC. Late in 1974, the Brostrom Group of Sweden acquired the transport division of Holland-America. Their ACL share now is owned and managed by Intercontinental Transport (ICT), BV, Dutch subsidiary of the Brostrom Group.

Atlantic Container Line initially was formed to enable these companies to meet the high costs involved in building, operating and developing its own fleet of RoRo container-

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ships. The group owed much of its original impetus to Wallenius, which has conceived the idea of building a fleet of large and fast RoRo cargo and car carriers for transatlantic service.

At the start, it was decided that while container capabilities would form a major part of the overall design of the ships, it also was recognized that shippers would require capacity for goods that could not be containerized, such a bulky mobile rolling stock, as well as other commodities.

ACL was the first ocean carrier to build such vessels for these specific purposes and, by early 1970's, had ten in operation. In 1984-85, the company placed in service five new RoRO Containerships, with capacities almost triple that of the earlier models and called them G-3s (third generation). These ships are now in the process of being lengthened 138 feet and, when completed in October 1987 will, at 958 feet long, be the largest RoRo Containerships in the world.

Also in 1987, ACL implemented a rationalization plan with Hapag Lloyd, under which, each carrier is permitted to charter space in the other's ships, thus reducing operating costs while increasing sailings to four times weekly between major U.S. East Coast ports and important seaports in Northern Europe, the United Kingdom and Scandinavia. In addition, Gulf Container Line was formed to provide service between leading U.S. Gulf ports and Savannah to Europe and the U.K., with through service to Iberia and Scandinavia. A major partner in GCL is Incotrans. ACL functions as U.S. agent for the new service. □

Audi

AUDI OF AMERICA, INC., imports and distributes advanced-design vehicles manufactured by Audi AG of West Germany. Audi of America, Inc., is located in Troy, Michigan, with five regional offices serving multi-state areas. In addition, independent distributors are located near New York City and St. Louis, Missouri.

Audi of America, Inc., was formed on September 1, 1985, and includes what had been Volkswagen of America's Audi Division. The functional areas within Audi of America include sales, service, merchandising, advertising, public relations and motorsports.

Audi entered the United States market in 1969. In the first full model year of 1970, Audi sold 7,691 vehicles through 138 dealers. In 1985, a record number of 74,061 Audis were sold through 408 dealers.

Audi AG, the manufacturer of Audi automobiles, is headquartered in Ingolstadt, West Germany, in the state of Bavaria, north of the city of Munich. The other principal Audi factory is located in Neckarsulm, near Stuttgart.

Audi traces its history back to the turn of the century. In 1909, August Horch left the automobile company he had founded under his own name and began a new firm called "Audi"—the Latin translation of Horch's name.

Among the world's automobile manufacturers, Audi is known for its leadership in product innovation, particularly in aerodynamic design and the advancement of its Quattro all-wheel-drive system. Audi AG is headed by Dr. Wolfgang R. Habbel, Chairman of the Board of Management.

In the U.S., Audi's advanced all-wheel drive technology has proven itself in motorsports. In July, 1987, two-time World Rally Champion Walter Roehrl drove an Audi Sport Quattro S-1 to an overall record at the Pikes Peak Auto Hill Climb in Colorado. It was Audi's sixth victory there in as many years.

Driving an Audi Sport Quattro, ten-time U.S. rally champion John Buffum continued his winning ways in 1987 on the Sports Car Club of America PRO Rally circuit. Also in SCCA competition, Audi scored two victories in the Escort Endurance Series Showroom Stock A class with a specially prepared Audi 5000CS Turbo Quattro.

Audi also captured its second win in the Uniroyal Goodrich One Lap of America Road Rally. Drivers John Buffum, Tom Grimshaw and Jeff Andretti piloted a showroom stock Audi 5000CS Turbo Quattro on the 8,000-mile rally across the United States.

In late 1987, Audi introduced its first new automobiles to America since 1983—the 1988 Audi 80 and 90 models. The steel bodies on these aerodynamic Audi 80 and Audi 90 models are fully zinc galvanized. This makes Audi the first passenger sedan manufacturer to offer fully zinc galvanized steel bodies on its complete model line.

For 1988, Audi offers ten models in the U.S., ranging in price from $18,600 to $35,250: the Audi 80, 80 Quattro, Audi 90, 90 Quattro, Audi 5000S, 5000S Wagon, 5000S Quattro, 5000CS Turbo, 5000CS Turbo Quattro and 5000CS Turbo Quattro Wagon. Audi automobiles are sold and serviced through a nationwide network of more than 400 Audi dealers. □

BASF

BASF CORPORATION is one of the ten largest chemical companies in North America. With $4 billion in sales, it accounts for about 20% of the BASF Group's worldwide business.

BASF has been serving the North American market for more than a century. Initially, the company built its business on imports from Germany. Today, 90 percent of its sales on this continent consist of products "Made in North America".

The company began to transfer its technology in the mid-50's. As a first major step, it joined the Dow Chemical Company in the manufacture of fiber intermediates. Ultimately, the joint venture expanded into man-made fibers.

In 1969, the chemical production base in North America was broadened with the acquisition of Wyandotte Chemicals Corporation. This was followed by the purchase of Dow's share of Dow Badische, Chemetron (pigments), GAF's dyestuff operations in Rensselaer, New York, and Fritzsche Dodge & Olcott. Concurrently, BASF capitalized on its know-how in building numerous plants in the United States.

In 1985, the company reinforced its position on the leading edge of chemical technology with the purchase of Celanese's advanced composite materials business. In addition, it strengthened its presence in coatings and printing inks with the acquisition of Inmont. With the purchase of American Enka, BASF became a major fiber manufacturer in North America.

A subsequent reorganization in 1986 put 12 of the variously-named BASF companies in North America, employing altogether 20,000 people, under the BASF Corporation umbrella. The company consists of the Chemicals, Fibers and Inmont Divisions, Information Systems (audio/video tape and computer media), Engineering Plastics and Engineered Components. Affiliates include BASF Structural Materials, Inc., BASF K+F Corporation (Knoll: pharmaceuticals, and Fritzsche Dodge and Olcott: flavors and fragrances) and BASF Canada Inc.

The BASF Group also conducts oil and gas exploration and production in the United States and Canada through its Wintershall organization. □

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- *German Enterprise in the United States*—the results of a survey conducted by the German American Chamber of Commerce and Arthur Young International, providing insights into the experiences of German-owned businesses across America.
- *Doing Business in the USA*—accounting, tax, regulatory and other—our national guide to issues associated with establishing and operating a business in the United States.
- *Starting and Operating a Business in . . . . .*—our by-state series published by Oasis Press providing information about organizing a business in a particular state.

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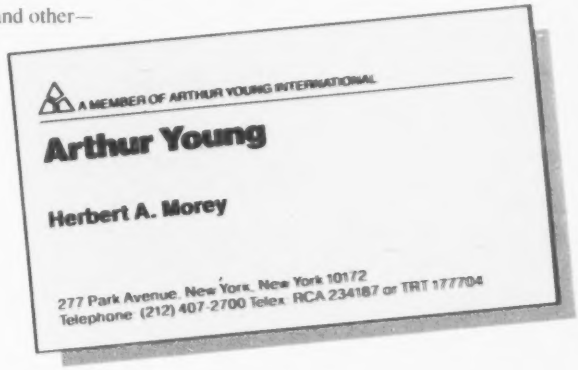
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We take business *Personally.*

BfG:Bank für Gemeinwirtschaft

Established in 1958 with head offices in Frankfurt, BfG operates as a commercial bank, offering its customers a complete range of "universal" banking services. With consolidated assets of DM 59.9 billion at the end of 1986, the BfG group ranks among the largest private German banks. It has a staff of 8,950 and maintains a network of 256 offices throughout the Federal Republic of Germany and West Berlin.

In recent years, BfG has also expanded its international banking activities, supported by its subsidiary BfG:Luxembourg, branches in Hong Kong, London, New York and Cayman Islands as well as associated banks in Amsterdam and Basel. A representative office is also maintained in Saó Paulo.

At the beginning of 1987 Aachener und Muenchener Beteiligungs-Aktiengesellschaft (AMB) acquired 50 percent plus one share of the BfG's share capital. The bank has thus gained a new partner able to offer a large number of interesting possibilities for cooperation. In the years ahead, we intend to fully utilize this potential for the benefit of both companies. The rest of the shares are owned by Beteiligungsgesellschaft fuer Gemeinwirtschaft AG (BGAG). □

BHF-BANK

BERLINER HANDELS- UND FRANKFURTER BANK

While the story of BHF-BANK dates back to the middle of the last century, its present status results from a merger between Berliner Handels-Gesellschaft and Frankfurter Bank in 1970. As a limited company the Bank is owned by approximately 20,000 shareholders and is directed by its personally liable managing partners. It is a merchant and commercial bank and issuing house, is involved in portfolio management and securities business, and has been active in international finance for more than a hundred years. With total assets of more than DM 27 billion, the Bank thus combines the advantages of a company that has access to the capital market, with all the flexibility of a private bank.

The Bank concentrates its creative skills on wholesale banking activities, principally for larger companies. Through the years its proven ability to tailor its facilities to meet the most stringent requirements of its clients and its commitment to efficiency and good service have contributed substantially to the successful development of many companies of all sizes—German and international companies as well as subsidiaries of multinational corporations operating in Germany.

Headquartered in Frankfurt, Germany's financial center, BHF-BANK serves a broad and diversified clientele: industrial companies (including nine out of ten top German companies), multinational corporations, and financial investors as well as private customers.

Through its branches in New York, Grand Cayman, London, Singapore and Tokyo, its subsidiaries in the U.S.A., Luxembourg, Switzerland and the U.K., and its representative offices in the major financial centers, BHF-BANK is well positioned to provide its clients with individually packaged financing wherever the need arises. □

When BMW OF NORTH AMERICA, INC. was established in the United States in March, 1975, the company faced the challenge of building a reputation in the U.S. for a very special type of automobile. The product was little known in this country except within a very select group of knowledgeable car en-

thusiasts who appreciated and understood the engineering refinements found in a BMW. Recognizing that it had to increase its penetration in the American market if it was to prosper here, BMW of North America's mission was clear: capture the attention of the larger group of consumers who the company was confident would appreciate the way BMW blended German tradition and technical innovation into an active, comfortable and safe driving experience.

The sales record of BMW in the United States shows that the goal was accomplished in dramatic fashion. Automobile sales have increased nearly six-fold; from 16,007 in 1974 to 96,759 last year. Sales are expected to approach 100,000 units in 1987.

While this sales level may not be statistically significant in the multi-million unit U.S. automotive market, BMW's product philosophy and growth rate have enabled it to capture what one automotive journalist characterized as a share mind that is totally out of proportion with its share of market.

During a decade of recession, gas crises and a restructuring of the automotive industry, BMW emerged as a leader in the most dynamic part of the American market, the luxury/performance segment.

BMW of North America's marketing strategy since 1975 has focused on elements which are most important to consumers in this market. In February, 1987, the company introduced eight new models to the American market, including a completely redesigned flagship model, the 735i. With the introduction of the 12-cylinder 750iL and the 325ix four-wheel drive car before the end of this year, the BMW line-up will consist of 14 distinct models strategically positioned in all segments of the over-$20,000 luxury/performance market.

BMW has systematically expanded the capacity of its dealer organization in the United States over the past 12 years by placing emphasis on development rather than sheer growth. By committing more cars to each dealership, BMW can work with each dealer on an investment program to create the personnel, work space and inventory capacities necessary to ensure customer service.

For 1987, BMW automobiles range in price from $23,750 for the 325 sports sedan to $67,000 for the 750iL. The company also imports 12 models of motorcycles, ranging in price from $4,100 to $8,950.

In the United States, BMW of North America is in the middle of a 5-year $100 million facility investment program that includes four regional office facilities with expanded technical training capacities, parts distribution centers in Mt. Olive, New Jersey and Ontario, California and a new headquarters complex in northern New Jersey. In addition, BMW has opened a new vehicle preparation center in the Port of Houston. Similar port facilities are currently under construction in Brunswick, Georgia and Oxnard, California and plans are underway for a fourth center on the East Coast.

BMW of North America maintains its headquarters in Montvale, New Jersey, approximately 30 miles from downtown New York City. Regional offices are located in the Atlanta, Chicago, Dallas, Los Angeles, San Francisco, Washington, D.C. and New York metropolitan areas. In addition to New Jersey and California, BMW operates a Parts Distribution Center in Dallas, Texas.

Gunter Kramer is the chairman and president of BMW of North America, Inc. □

Baden-Württemberg

The state of BADEN-WUERTTEMBERG is located in the southwestern corner of the Federal Republic of Germany. It is the third largest state, with an area of 35,750 square kilometers and 9.2 million inhabitants. The geographical location represents a particular advantage for both manufacturers and consumers: the major share of all Western European population centers and industrial regions is located within a radius of only 700 kilometers from Stuttgart, the state's capital.

It's favorable location, the high qualifications of its people and its well-balanced economic structure have made Baden-Wuerttemberg the economically most powerful state of the Federal Republic of Germany and thus probably also in Europe.

But Baden-Wuerttemberg is not only the economically most powerful state of the Federal Republic of Germany; it is also among the states with the most promising growth perspectives.

Since the beginning of 1987, the STIFTUNG AUSSENWIRTSCHAFT, Department for Industrial Cooperation and Development (former LEG, State Development Corporation), has been in charge of the promotion of foreign investment in the state. This department also assists small and medium sized enterprises in finding cooperative partners from abroad and vice versa—a free-of-charge service.

Look to Baden-Wuerttemberg, if you are looking in Europe for:

—a joint venture partner, because modern industries need modern partners
- in dynamic companies
- that welcome new ideas
- that can handle new technologies
- with proven records of success.

—plant locations, because modern industries need modern sites
- advanced research facilities
- superior quality of life
- skilled labor
- well-developed transportation and communication network.

—suppliers, because modern industries need modern suppliers
- with trend-setting products
- with high-precision products
- known for quality and reliability
- demanding a fair price

—R & D support, because research centered industries need a research-oriented environment
- Baden-Wuerttemberg houses 30% of West Germany's R & D potential, with only 15% of the nation's population. It covers all the fields of microelectronics, measuring and control, sophisticated sensoring, cancer research, systems and process technology, robotics, and environmental technologies.

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Bayer USA INC.

Bayer's presence in the United States was enhanced considerably in 1986 by the formation of BAYER USA, INC., Pittsburgh, PA a U.S. mangement holding company of Bayer AG, Leverkusen, West Germany. Bayer has been in the U.S. since 1865, two years after the company was founded in Germany. What began with a small dyestuff plant near Albany, NY, as grown into a more than $4 billion company with businesses in chemicals and polymers, health and life sciences and imaging and graphic information systems. In 1986, Bayer USA ranked 117th on the Fortune 500.

Today Bayer USA is composed of eight operating companies employing more than 24,000 people. Sales in 1986 were $4.2 billion, accounting for about 20 percent of Bayer's worldwide sales, making the company one of the most diversified producers of chemicals and other products both here and abroad.

In the United States, Bayer has the follow-

ing operating companies:

Mobay Corporation, *Pittsburgh, PA, began operations in the early 1950s to introduce polyurethane chemistry to the United States market. Since then, the company has expanded into animal health care products, agricultural chemicals, coatings, dyestuffs, pigments, plastics, textile fibers and inorganic, organic and rubber chemicals. Mobay has annual sales of about $1.7 billion, 6,500 employees and total assets of $1.2 billion.*

Miles Inc., *Elkhart, IN, became part of Bayer in 1978. In its 100-year history, the company has established a solid reputation in the health care field and related sectors. With assets of $1 billion and 11,350 employees worldwide, annual sales amount to about $1.2 billion.*

Agfa-Gevaert, Inc., *Ridgefield Park, NJ, is a leading producer of photochemical and phototechnical products with two subsidiaries, about 1,400 employees and about $490 million in annual sales.*

Compugraphic Corporation, *Wilmington, MA, is the world's leading supplier of hardware and software used in computerized typesetting equipment systems. The company has sales of about $340 million, employs 4,600 people and has total assets of $330 million.*

Haarmann & Reimer Corporation, *Springfield, NJ, manufactures and distributes flavors, fragrances and aroma chemicals. In 1978 the company took a major step into the aroma chemicals market by opening a synthetic L-Menthol plant in Charleston, SC. With about 175 employees, Haarmann & Reimer has annual sales of more than $40 million.*

Deerfield Urethane, Inc., *South Deerfield, MA, is involved in the manufacture of a wide range of film applications for coated fabrics, medical products, belting and other uses. Sales total approximately $20 million.*

NRC Inc., *Newton, MA, is the U.S. manufacturing unit of Hermann C. Starck, a 1987 Bayer acquisition and one of the world's major producers of capacitor-grade tantalum for the electronics industries, tantalum and niobium mill products and niobium and tantalum oxides. NRC has annual sales of approximately $40 million.*

Wyrough & Loser, Inc., *Trenton, NJ, a 1987 Bayer USA acquisition, is a formulator and marketer of rubber processing and dispersion chemicals for the tire and cable markets, with annual sales exceeding $20 million.*

Together these operating companies in the United States have full accesss to Bayer's global research capabilities which total more than $1 billion, one of the largest in the chemical industry, of which $200 million was spent in the U.S. in 1986. □

HYPO BANK
Bayerische Hypotheken- und Wechsel-Bank Aktiengesellschaft

In 1835, HYPO-BANK was established in Munich by royal decree of King Ludwig I of Bavaria. HYPO-BANK is Germany's oldest publicly-quoted bank and one of the largest with consolidated assets of more than DM 113 billion.

HYPO-BANK is engaged in both commercial and mortgage banking, operates the largest branch network in southern Germany and is also active nationwide in key business centers such as Berlin, Duesseldorf, Frankfurt, Hamburg, Hanover, and Stuttgart. The bank is a prime address for correspondent banking.

Its New York Branch offers a complete range of corporate banking services including prime and Libor-based loans, foreign exchange, money transfers, letters of credit and documentary collections as well as international private banking. Through other branches in Cayman Islands and London, its wholly-owned subsidiary in Luxembourg, representative offices in Brazil, Hong Kong, Italy, South Africa and Spain, and its partnership in ABECOR, HYPO-BANK offers

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Bayerische Landesbank

BAYERISCHE LANDESBANK's origins date back to the late nineteenth century, and the Bank has grown into one of the leading banking institutions in the Fed. Rep. of Germany. Headquartered in Munich, Bayerische Landesbank operates branch offices in New York, London, Singapore and a subsidiary in Luxembourg, as well as Representative Offices in Vienna, Toronto and Johannesburg. In addition, a Grand Cayman Branch as well as an International Banking Facility (IBF)—operating out of New York—supply offshore banking services.

Bayerische Landesbank, a public sector institution, is 50% owned by the State of Bavaria and 50% by the Bavarian Savings Bank's Association. The Association is owned by the savings banks, which in turn are owned by their municipalities. By statute, Bayerische Landesbank's obligations are jointly and severally guaranteed by its owners.

Bayerische Landesbank's total assets now exceed DM 115 billion. The Bank has been accorded the highest short and long-term ratings from both major U.S. agencies (Moody's P-1, Aaa; Standard & Poor's A-1+, AAA).

The Bank offers a wide range of financial services on a global basis. In Germany, it is one of the largest issuers of securities as well as a major corporate lender. Its primary strengths include a substantial DM deposit base and long-term, fixed rate DM loan capabilities.

Since establishing its Representative Office in New York in October 1979, and gaining full branch status two years later, in October 1981, Bayerische Landesbank has become a major wholesale lending participant throughout the country.

The New York Branch offers a full range of domestic and international financial services, including loans, foreign exchange and money market expertise, as well as documentary and collection capabilities.

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BAYERISCHE VEREINSBANK
AKTIENGESELLSCHAFT

BAYERISCHE VEREINSBANK AKTIENGESELLSCHAFT, incorported in Munich as a commercial bank in 1869 and merged with Bayerische Staatsbank (founded 1780), today ranks fourth among the largest private-sector banks in Germany. Together with its mortgage subsidiaries, Bayerische Vereinsbank is the largest private-sector, long-term banking group in Germany. As of December 31, 1986, the Bank's balance sheet total stood at DM 81.5 billion, consolidated total assets at over DM 140 billion. Our ratings are as follows: P 1 (Aaa for long term rating) with Moody's and A-1+ with Standard & Poor's.

As one of the few banks specializing in both the commercial and mortgage fields, BV offers particularly diversified services. Bayerische Vereinsbank holds interests in several well-known private banks in West Germany. The Bank's wholly-owned subsidiary, Bayerische Vereinsbank International S.A., Luxembourg, is active in the Euromarket with a business volume of some DM 7.3 billion and a considerably improved income status.

International business is conducted by about 50 domestic branches as well as out of about 20 locations strategically placed around the world. Bayerische Vereinsbank has also strengthened its market position in international financing and securities business, both at home and abroad.

North America was again a major focus of Bayerische Vereinsbank's international activities in 1986. The bank's network in North America is one of the largest of all German banks, with offices in New York, Chicago, Los Angeles, Atlanta and Cleveland, plus an IBF in New York as well as a Eurobase in the Cayman Islands. In 1987 Bayerische Vereinsbank replaced its subsidiary for investment banking in North America, Associated European Capital Corporation, with BV Capital and its subsidiaries BV Capital Management and BV Capital Markets.

With over 400 branches and staff of nearly 12,000 employees, Bayerische Vereinsbank offers comprehensive domestic and international services tailored to the individual needs of its clients. The Bank is one of Germany's largest joint-stock credit institutions and has about 93,000 shareholders. □

BECKER AUTORADIO

Becker Autoradio is known worldwide for its quality radios, which are factory-installed in the leading makes of German automobiles and also sold through authorized dealers.

BECKER OF NORTH AMERICA, INC., operates the nationwide service network that maintains Becker automobile radios and also imports and distributes them to aftermarket retailers. Becker of North America, Inc., also imports, distributes and services Becker avionic equipment, including communications and navigation equipment as well as emergency transmitters and receivers.

Becker products are manufactured in several locations in West Germany. The company's worldwide headquarters, research and development offices and main manufacturing plant are located in Ittersbach, West Germany.

The company was founded in 1945 when Max Egon Becker, a radio enthusiast, opened a small radio sales, repair and audio research business in two rooms of a 300-year-old house in Pforzheim, West Germany.

By 1948, with the aid of a small staff, Becker produced a limited number of automobile radios. The following year, the first Becker Autoradio was installed in a Mercedes-Benz. Since that time, Becker has remained the radio of choice for Mercedes-Benz.

In the next decade, the company grew in size and its radios continually outperformed other radios in numerous competitions. In 1953, Becker introduced the company's first AM-FM car radio with a signal-seeking circuit. This proved to be a breakthrough which permitted single control, automatic selection of stations on both AM and FM bands and greatly simplified operation.

In 1956, the company entered the sophisticated avionics field and its first product, the communication set "AR 24", was an instant technical and commercial success.

By 1960, with the number of Becker radios on American roads growing so rapidly, the company decided to set up a United States facility in Pasadena, California.

In 1982, the company moved to its present quarters in Upper Saddle River, New Jersey, allowing Becker of North America, Inc. to provide increased service and to maintain a large inventory of radios and parts to keep pace with the increasing demand on this continent. □

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Boehringer Ingelheim

BOEHRINGER INGELHEIM CORPORATION, Ridgefield, Connecticut, is a health care company and the principal licensee of Boehringer Ingelheim International GmbH. A wholly-owned subsidiary of Pharma-Investment, Ltd., Toronto, Canada, Boehringer Ingelheim Corporation is a major chemical and pharmaceutical company which develops, produces, and sells a wide range of pharmaceutical specialties, veterinary medicines and biologicals, agricultural chemical products, and fine and specialty chemicals throughout the world.

Boehringer Ingelheim Corporation is the parent and sole stockholder of a number of companies, the largest of which is Boehringer Ingelheim Pharmaceuticals, Inc., Ridgefield and Danbury, Connecticut, an ethical pharmaceutical and consumer products developer and manufacturer. Its other companies include Roxane Laboratories, Inc., Columbus, Ohio, a pharmaceutical unit dose manufacturer; Boehringer Ingelheim Animal Health, Inc., St. Joseph, Missouri, a developer and manufacturer of veterinary medicines and biologicals; and a group of chemical companies, including Henley Chemicals, Inc., Montvale, New Jersey, fine and specialty chemical distributors; Infracorp Ltd., Petersburg, Virginia, a chemical engineering and service group operated in conjunction with Lee Laboratories, Petersburg, a joint venture with A.H. Robins, producing pharmaceutical chemicals.

The Boehringer Ingelheim Corporation has a strong commitment to the development, manufacture, and sale of significant new products for both human and animal health care. ☐

brauner

For 50 years BRAUNER INTERNATIONAL CORPORATION has served the freight forwarding and customs brokerage needs of importers and exporters throughout the world. Founded in 1931 by Curt August Braeuner, who began his forwarding career in Hamburg, Brauner International Corporation has offices at One World Trade Center, New York as well as at J.F.K. International Airport.

Over the years, as the pace of importing and exporting has increased through the use of containerization and the increased utilization of air freight, Brauner International has kept abreast of each new development. Brauner International Corp. was the first to pioneer a through container service to Switzerland. It was first to run a regularly scheduled furniture container from Norway to the United States. The first "LASH" barge shipped door to door from Duisburg, Germany to East Chicago, Indiana was forwarded by Brauner International Corporation. Through its correspondents in Germany, Brauner International offers innovative and far-reaching forwarding services.

Through advanced office procedures Brauner International Corporation has created systems which keep the paperwork in step with faster methods of transportation and distribution, whether it be roller bed delivered airfreight or door to door sea container distribution. ☐

CARL G. BRIMMEKAMP & COMPANY, INC. (CGBCO) was established in San Francisco in 1962 and is now headquartered in the New York Metropolitan Area in

Stamford, Connecticut, to be closer to the principal industrial and financial centers of the USA. CGBCO offers foreign industrial manufacturing and engineering companies easy access to the North American market, and, likewise, assists North American industrial firms to gain a foothold abroad with the help of affiliated companies in Belgium and the Federal Republic of Germany as well as agents in other countries.

This dynamic firm of professionals assists its foreign and North American clients in all phases of the transfer of technology and capital goods across the oceans.

CGBCO maintains conveniently located U.S. branch offices in the Chicago, Houston and San Francisco areas. To further expand its North American coverage for its foreign clients, new branches are planned in the South-East USA and the Toronto Metropolitan Area.

CGBCO's clients include well established engineering firms and highly specialized privately or publicly owned manufacturers of state of the art capital goods and technology who are seeking opportunities abroad or in the North American market place.

CGBCO's knowledgeable staff of engineers, as well as financial and marketing experts, is assisted by highly specialized outside consultants to help its foreign and North American clients to identify and attain the expert technological know-how necessary for their particular production requirements.

CGBCO's staff members come from the industries which they now service:

- pulp and paper
- chemicals and pharmaceuticals
- fibers and plastics
- energy and alternative fuels
- mining and cement
- ferrous and non-ferrous metals
- machine tools
- bulk solids and materials handling.

Working within their areas of expertise, CGBCO's professionals arrange for their client firms to:

- import/export
- Americanize the imported capital goods to conform to U.S. standards
- have North American capital goods to be exported conform to foreign standards
- partially manufacture in North America or abroad
- manufacture under license
- contract manufacture in North America
- acquire total or partial equity in North American companies
- establish a North American company.

Particular emphasis is placed on an efficient after sales service, for which purpose CGBCO maintains demonstration facilities and a warehouse for spare parts which are not readily available in North America.

CGBCO can also facilitate financing, either through private or governmental sources.

CGBCO is also prepared to enter into joint venture arrangements with North American or foreign firms and can furthermore make available its office infrastructure and qualified personnel to its foreign clients for on-the-spot administrative, financial, procurement, manufacturing, marketing, sales and after sales service. □

CARRÉ, ORBAN & PARTNERS

CARRE, ORBAN & PARTNERS INTERNATIONAL is a firm of management consultants with offices in Amsterdam, Brussels, Duesseldorf, Geneva, London, Milan, New York, Paris, Rome and Zurich. The firm's clients are industrial, financial and service businesses as well as governmental and international organizations.

The prime objectives of Carre, Orban & Partners International are to bring professional, pragmatic and long lasting solutions to their clients' executive resource management problems and to assist clients in

CARRÉ, ORBAN & PARTNERS INTERNATIONAL

Executive Search, Management Audits, Executive Resource Management, Corporate Mergers and Acquisitions

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capitalizing on new business and technological opportunities.

Executive Search

This service assists clients in the selection of senior-level human resources. The firm works with clients to define the parameters of a given position in order systematically to search, evaluate, select, motivate and integrate the newly chosen executive into a client company. The firm also accepts assignments to identify and select outside board members.

Management Audits

This service guides clients in evaluating management structures and advises in times of strategy review during mergers, turnarounds or divestments. It includes analysis of management structure, evaluation of executive capabilities, and suggestions of ideal executive profiles.

Executive Resource Management

The firm provides expertise in assisting their clients' leaders in the management of their top 15 to 150 careers. This includes the design of recruiting, performance appraisal and compensation programs as well as resolving issues in industrial labor relations and restructuring corporate training and development programs.

Corporate Mergers and Acquisitions

The firm undertakes searches for acquisition or merger candidates, as well as searches for joint venture corporate partners. Such acquisition engagements assist clients in finding new businesses, new markets or new technological fields.

For more information, please contact: Volker T. Wiegmann, Carre, Orban & Partner GmbH, Koenigsallee 6-8, D-4000 Duesseldorf 1, West Germany, Telephone (0211) 87 73—0, Telex: 858-6726, Telefax: (0211) 87 73—100, or R. William Faville, Carre, Orban & Partners, Inc., 230 Park Avenue, Suite 1624, New York, N.Y. 10169, USA, Telephone (212) 953-7722, Telex: 148-458, Telefax (212) 953-7417. □

CHASE

THE CHASE MANHATTAN BANK serves individual, corporate, institutional and government clients around the world.

With 47,000 employees in 65 countries, Chase provides a comprehensive range of financial products and services.

Chase AG, headquartered in Frankfurt, can call upon a distinguished team of investment bankers experienced in mergers and acquisitions, leasing, swaps, private placements and syndications. Within Germany, Chase Manhattan has industry expertise in manufacturing, primary industries, energy, shipping, media and electronics, consumer goods and services and aerospace.

The service products sector of Chase brings under one management cash management products, trade finance and international advisory services, all deliverable through a global electronic network. □

COMMERZBANK

Founded in 1870, COMMERZBANK soon became a leading force in German banking. Today, it ranks third among the "Big Three" German branch banks, providing an extensive range of services for its almost 8 million customers at home and abroad. Its consolidated total assets as of September 30, 1987 reached nearly DM170bn, with its capital and reserves amounting to more than DM4.76bn. As of that same date, the Commerzbank Group maintained a network of almost 900 branch offices at home and abroad, employing nearly 25,000 people.

Commerzbank is strongly engaged in all kinds of commercial, investment, and merchant banking, while also being active as a broker/dealer. Emphasis in commercial banking used to be on short and medium-term loans, but more recently long-term lending has increasingly become significant, too. Although the bank has always considered wholesale banking as one of its particular strong points, retail banking has also experienced rapid growth over the past 25 years and now accounts for roughly half of the bank's business at home.

Commerzbank's domestic presence is reinforced by some 20 banking and financial associates, the most important of which are RHEINHYP-Rheinische Hypothekenbank, a leading German mortgage bank, and Berliner Commerzbank, the bank's West Berlin subsidiary.

Non-domestic activities today add up to approximately one-third of Commerzbank's total business, stretching from trade and corporate finance to syndication business and project finance, while also including foreign exchange and interest swaps, currency options and sophisticated cash management services.

The bank's international presence extends to about 70 foreign outlets and holdings in over 30 countries. Operative units, which concentrate on wholesale business, are maintained in all the major international financial centres, where thirteen branch offices and four wholly-owned subsidiaries are maintained. In addition, the bank runs 17 representative offices and has numerous holdings in foreign financial institutions.

Commerzbank has always maintained especially close relations with the U.S. In 1971, it transformed its New York representative office—which dated back to 1967—into an operative unit, thus becoming the first German bank to open a full-service branch in the country. It expanded its U.S. presence by establishing another branch office in Chicago in 1974 and an agency in Atlanta in 1979. Commerzbank's latest move in the U.S. was the opening in the autumn of 1985 of a loan production office in Los Angeles. □

Coopers & Lybrand

Growing your business in a new country is not a simple task. An adaptation process is required so that your new American venture can succeed in its new environment. COOPERS & LYBRAND understands that this "cultural transplant" needs a great deal of tending and has designed a special program for both German investors and German companies with U.S. operations.

Our network of 90 U.S. offices is staffed with partners experienced in both start-up and well established businesses. All our people are business people who approach work with one overriding goal: to help your company succeed. We have the financial and management experience to make your German business a success in America.

Our special program for German companies is led by James W. Zug, John T. Rudden and Bernhard Westermann, who are fluent in German and travel to Germany regularly. They have already helped many large and small German companies establish new operations and make acquisitions in the U.S.

To help you become part of your new environment quickly, Coopers & Lybrand can provide you with introductions to banks, attorneys and members of the local business community.

Because of Coopers & Lybrand's expertise in different industry groups, we can also advise you on the economics and problems facing specific industries in the U.S. We will keep you abreast of changing rules and regulations from Washington and guide you through the complex maze of actuarial, benefits and compensation regulations.

Through its member firm, Treuhand-Vereinigung AG and its subsidiary, Karoli-

Wirtschaftspruefung GmbH, Coopers & Lybrand maintains offices in Berlin, Cologne, Essen, Frankfurt, Hamburg, Hannover, Karlsruhe, Munich, Pirmasens, Stuttgart and Kassel.

For further information, contact James W. Zug, Coopers & Lybrand, 217 E. Redwood Street, Baltimore, Maryland 21202, Telephone: (301) 783- 7612, TWX: 710-234-2311, or John T. Rudden, Coopers & Lybrand, 80 Park Plaza, Newark, NJ 07102, Telephone: (201) 621 1288, TWX: 710-995-4740, Telex: 138461; 1251 Avenue of the Americas, New York, NY 10020, Telephone: (212) 536-1850, TWX: 710-581-4544, Telex: 423552 (international), FAX: 212-536-3035 or 212-536-3500. □

DG BANK

Deutsche Genossenschaftsbank

DG BANK, a German wholesale bank headquartered in Frankfurt and operating an extensive international network, provides comprehensive commercial and investment banking services and acts as central bank for the German cooperative banking system.

The Bank has been operating a branch in New York for over ten years; this presence was reinforced with a branch in Los Angeles and, more recently, a representative office in Atlanta, Georgia. Offshore business is conducted through an International Banking Facility and a Cayman Islands Branch.

The New York Branch of DG Bank provides a wide range of commercial banking services for corporate, institutional and private clients; its trust business includes money management services to institutional and private clients, emphasizing investment advisory and custodial services and real estate advisory services as well as traditional cash management.

Early in 1987, the DG Securities Services Corporation, a wholly-owned subsidiary of DG Bank, commenced business in New York City as a broker, investment advisor, and portfolio manager for American institutional investors interested in German and other non-U.S. securities.

In 1986, DG Bank opened a Tokyo Branch for securities business and the DG BANK—GZB (Asia) Ltd. in Singapore for investment banking business. Moreover, DG Bank participated in establishing the Unicbank Rt. in Budapest, where one of its partners is the IFC International Finance Corporation of the World Bank Group.

At year-end, 1986, the consolidated assets of the DG Bank Group were DM 112 billion (U.S. $ 57.7 billion) while its business volume (total assets plus contingent items) reached DM 119.2 billion (U.S. $ 61.4 billion). Several banks were newly included in the consolidated statements, notably the DG Bank (Schweiz) AG of Zurich, the London & Continental Bankers Ltd. of London and the DG Finance Company BV of Amsterdam.

During 1986, the consolidated assets of the entire German cooperative banking system—3,600 local banks with a total of over 19,500 offices, six regional banks, the DG Bank Group and numerous specialized financial institutions—increased by 4.8 percent to DM 532.2 billion (U.S. $ 274.2 billion). Ultimately, the system is owned by more than 10.7 million West German shareholder institutions and individuals from all walks of life. □

DANZAS

DANZAS GmbH, one of the big forwarding organizations in Germany is a wholly owned subsidiary of DANZAS AG, Basle and was founded in 1919. Today we have 75 offices in the Federal Republic of Germany, including West Berlin.

Special divisions for air- and seafreight and for project shipping worldwide, specialized departments for food transports as well as for Trade Shows in Germany and abroad guarantee a high measure of competency and experience. As one of the largest forwarders, we offer a full range of transportation.

We know the competing carriers and we are able to match special demands and their special requirements. Being independent, we are not obligated to any carrier.

DANZAS GmbH cooperates with the whole DANZAS network internationally in Europe and overseas. We are represented in all 5 continents with more than 550 DANZAS offices and 11,000 employees.

In addition, DANZAS International as our sales representation in the USA (among others in New York, Atlanta, Charlotte, Greenville-Spartanburg, Los Angeles, Miami and Richmond) holds a tight contact with our customers.

DANZAS ALLTRANSPORT (Div. of Alltransport, Inc.) headquartered in New York, has branches in Baltimore, Chicago, Houston, Los Angeles, New Orleans, and Norfolk. Another subsidiary is the DANZAS Seaway Forwarding Corp. in Cleveland and Toledo.

The entire DANZAS organization guarantees professional handling for all door to door forwarding requirements across international boundaries.

To offer our client up-to-date handling in documentation and communication, we use the most advanced equipment to communicate around the world.

We will continue to serve our customers efficiently in the future and to help them save money in the field of transportation, because this is our market. □

Degussa

DEGUSSA AG, founded in 1873 and headquartered in Frankfurt/West Germany, has grown from a refiner of gold and silver coinage to an international leader in the development and manufacture of chemical, precious metal and pharmaceutical specialties with worldwide annual sales exceeding $5 billion. In addition to maintaining numerous plants and research and develpment laboratories in the Federal Republic of Germany, Degussa supplies intermediate products from manufacturing facilities in 22 countries throughout the world.

Degussa Corporation, the American subsidiary of Degussa AG, supplies technology, services and products used in diverse domestic industries such as agriculture, automotive, ceramic and glass, dental, electronic, health care, plastic and textile. Production plants in the United States are located in Alabama, California, Kentucky, New Jersey, New York and Pennsylvania.

The most important development during 1986 was acquisition of Metz Metallurgical Corporation, South Plainfield, New Jersey, a major fabricator and refiner of precious metal products used in the electronic, photographic, chemical, pharmaceutical and automotive industries. The company also manufactures metallurgical products, such as electrical contact materials and brazing alloys, and provides a full range of precious metal refining services. Metz operates as a wholly-owned subsidiary of Degussa Corporation. Future plans include increased investment, expanded research and development and transfer of Degussa's refining activities and precious metal management operations to Metz. Acquisition of this fine family-owned company fits well into Degussa's strategy of expanding into new segments of the U.S. market.

Construction of Degussa Corporation's new hydrogen peroxide plant at its Theodore, Alabama, manufacturing complex was completed in July 1987, and production started in

the meantime. In order to expand the market for hydrogen peroxide, Degussa is introducing technology which has applications in precious metals mining, waste-water treatment and the pulp and paper industry.

In late 1986, ground was broken for a $70 million plant and related facilities to produce Ultraform® acetal copolymer at the Theodore, Alabama, facility. This is a joint venture between Degussa Corporation and BASF Corporation. The plant's initial annual capacity will be 24 million pounds.

The new Applied Research & Technical Service Laboratory in Allendale, New Jersey, became fully functional during 1986 and is concentrating on lending support to the hydrogen peroxide, amino acid and silica markets.

The recent investments will provide a sound basis for continued expansion of Degussa Corporation's manufacturing capabilities and market penetration. □

Deutsche Bank
A century of universal banking

DEUTSCHE BANK AG, headquartered in Frankfurt-on-Main, is the largest bank in the Federal Republic of Germany with total assets (consolidated) as per December 31, 1986 of DM 257.2 ($132.5) billion, deposits of DM 233.8 ($120.5) billion and stockholders' equity of DM 10.0 ($5.2) billion. It is also one of the world's leading banking institutions.

Deutsche Bank as a "universal bank" is active in both commercial and investment banking. The Deutsche Bank Group consists of commercial banks, mortgage banks, investment banks, leasing companies, international financing companies and other specialized institutions in Germany and abroad.

As Germany's largest investment bank and brokerage firm, Deutsche Bank is among the top participants in the Eurobond market and is represented in all important financial centers of the world. Through Deutsche Bank Luxembourg S.A., the Bank is one of the leading institutions involved in Euromarket lending and loan syndications.

The Bank's commercial banking activities have become increasingly international in recent years in order to strengthen its presence in the major expanding markets, expecially in the Pacific basin, Europe and North America. Its network of domestic and international offices and subsidiaries has been consistently expanded and its cooperation with more than 4,000 correspondent banks throughout the world has been steadily intensified.

Deutsche Bank's objectives in North America last year continued to center on serving the needs of its German clients active in the U.S. and Canada as well as on developing further its position in the North American domestic corporate market. Its New York Branch, established in 1978, is involved in commercial wholesale banking with an emphasis on short and medium term lending, trade finance, international documentary business, foreign exchange and money market dealings. Offshore activities are channeled through the International Banking Facility (IBF) and Caymen Islands Branch. Representative Offices are maintained in Chicago and Los Angeles.

Also since 1978 the Bank has been active in the U.S. in sales financing through its now wholly-owned subsidiary Deutsche Credit Corporation in Deerfield, Illinois (see separate profile). Deutsche Bank is also engaged in U.S. investment banking through it wholly-owned subsidiary Deutsche Bank Capital Corporation (see separate profile). In Canada the bank operates through Deutsche Bank (Canada), and a representative office, both in Toronto.

Deutsche Bank has 15 branches, 18 representative offices and 11 wholly-owned subsidiaries on all continents. Group staff numbering about 53,500 at more than 1,500 branches provides services to 6.6 million cus-

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A product attractive in appearance and adaptable to your needs.
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St. Augustine, Fla. 32084 (904) 794-1500

tomers all over the world: individuals, corporate customers of all sizes, banks, public authorities, states and supranational institutions. □

Deutsche Bank Capital Corporation

DEUTCHE BANK CAPITAL CORPORATION (DBCC) has been operating in New York since 1971 and presently employs over 180 professionals and staff. It is a member of the New York Stock Exchange and other principal U.S. exchanges. Deutsche Bank Capital Corporation has paid-in capital in excess of US $100 million.

DBCC's Corporate Finance Department offers a wide range of public and private financings in the U.S. to both U.S. and international clients, including public debt and equity underwriting, tax-exempt issues and private placement of preferred stock long-term debt. The Merger and Acquisition services include advice on mergers, acquisitions, divestitures, and joint ventures in the U.S. and Europe. DBCC's International Leasing Group, as part of the Bank's International Leasing Department, provides clients with a complete range of U.S. and international leasing structures; this includes crossborder leasing and combinations of crossborder and U.S. structures.

The DBCC Swap Department, in concert with the bank's swap teams in London, Tokyo and Frankfurt, gives advice on and executes interest rate, currency and cross-currency interest rate swaps in all major currencies.

DBCC's International Securities Department trades and makes markets in German and other foreign equities and ADRs as well as major currency fixed-income securities. An integral part of the bank's worldwide investment banking network, the International Securities Department provides access to Deutsche Bank's trading and research departments in all important financial centers.

The U.S. Dollar Equities Department provides institutional investors with U.S. equity brokerage, weekly analyses of U.S. economic and capital market conditions, primary research on North American equities and direct placement of primary and secondary equity offerings through its syndicate participations. This department serves as an important link between German investors and U.S. stock markets. DBCC is a *major bracket* underwriter of U.S. corporate bonds and a major distributor of eurodollar bonds for the Deutsche Bank Group.

DBCC's money management services are available to institutional and substantial private investors wishing to diversify into U.S. dollar equity and fixed-income investments. Employing a top-down, fundamentally-driven approach, this department emphasizes capital preservation and risk avoidance. Investment strategies adhere to guidelines established in conjunction with the client.

The Real Estate Division of DBCC combines real estate expertise with capital markets experience to create traditional or innovative financing services. These include securitization of investment-grade commercial real estate, private sales and the sponsorship of income-oriented partnerships. This division acts as investment advisor to a number of Real Estate Investment Trusts with investments of approximately US $800 million.

DBCC cooperates closely with the bank's other North American operations in a wide variety of public and private financings and financial services. □

EM INDUSTRIES, INC.

THE US ASSOCIATE OF E. MERCK, DARMSTADT/GERMANY

PIGMENT DIVISION
5 Skyline Drive
Hawthorne, NY 10532
Tel. (914) 592-4660
Telex 178 993

ADVANCED CHEMICALS DIVISION
5 Skyline Drive
Hawthorne, NY 10532
Tel. (914) 592-4660
Telex 178 993

EM SCIENCE
111 Woodcrest Road
P.O. Box 5018
Cherry Hill, NJ 08034-0395
Tel. (609) 354-9200
Telex 902 556

FINE CHEMICALS DIVISION
5 Skyline Drive
Hawthorne, NY 10532
Tel. (914) 592-4660
Telex 178 993

EM INDUSTRIES INC., 5 SKYLINE DRIVE, HAWTHORNE, NY 10532

Deutsche Credit Corporation

DEUTSCHE CREDIT CORPORATION, a Chicago based commercial finance company with a nationwide network established in 1978, is a wholly owned subsidiary of Deutsche Bank AG and a major source of asset based financing or leasing for domestic and international companies.

The comprehensive range of financial services offered by Deutsche Credit Corporation includes custom-designed financing programs in areas like capital equipment loans, leasing, leveraged leasing, conditional sales financing, floorplanning and private label financing. These wholesale and retail marketing programs can accommodate manufacturers, dealers/distributors and end-users.

Deutsche Credit Corporation focuses on financing capital goods produced by the following industries: Aircraft, Communications, Construction Machinery, Data Processing, Electronic Instrumentation, Machine Tools, Material Handling, Medical Equipment, Mining, Printing and Graphic Arts, Transportation, Production Machinery and more.

Headquartered in Deerfield, Illinois (a Northwestern suburb of Chicago), Deutsche Credit Corporation employs 160 professionals in the head office and its regional and district offices, located in major cities such as Atlanta, Chicago, Dallas, Minneapolis, Philadelphia and San Francisco. Through the firm's marketing representatives, based in twenty major industrial areas across the United States, Deutsche Credit Corporation is able to provide efficient financial service to its corporate clients nationwide. □

DRESDNER BANK AG was established in 1872 and is headquartered in Frankfurt, West Germany. With a world-wide consolidated business volume of the Dresdner Bank Group of approximately DM 197 billion, the company ranks among the largest banks in the world.

As a "universal bank," the Dresdner Bank offers the full range of banking services. Internationally, the bank specializes in investment advice and in the management of mutual funds and of pension funds. It also holds a leading position in placing bond issues floated by foreign issuers, and in introducing the shares of foreign corporations to German stock exchanges. The bank also plays a significant role in the foreign exchange and money businesses as well as in gold coin and in bullion trading.

As Dresdner Bank has been internationally orientated from the very beginning its foreign business makes up about a third of total business volume. Decades of experience, a network of branches and representative offices abroad, and co-operation with over 5,000 correspondent banks all over the world enable the bank to back the industry in their international business. As syndicate manager Dresdner Bank has organized the financing of numerous large-scale projects in several countries. Of significance is furthermore the Bank's leadership in financing the sales of the European Airbus A 300 and A 310.

Dresdner Bank was the first German bank to establish, in 1967, a subsidiary in Luxembourg, Dresdner Bank International, which successfully engages mainly in international finance, securities, money market, foreign exchange and precious metals business.

In recent years the Bank has strongly intensified its involvement in the United States and maintains fully operating Branches in New York, Chicago and Los Angeles and Representative Offices in Houston, Texas, and Miami, Florida. With its 75% participation in ABD Securities Corporation, New York, Dresdner Bank has also gained a good position in the American brokerage and investment business for U.S. as well as German customers.

Dresdner Bank meets the needs of its customers in dealing with the increasingly more specialized problems arising in international business by offering an individualized advisory service backed up by vast connections including offices in more than 50 countries on all continents. □

EM INDUSTRIES, INC.

EM INDUSTRIES' business will reach a volume of $100 Mil. in 1987 and is channeled through four operating divisions:

The PIGMENT DIVISION supplies pearlescent pigments for cosmetic and industrial applications. These pigments are produced in a large industrial facility in Savannah, GA, which was constructed in 1979 and is presently being expanded.

Among the industrial applications, the major target group is the automotive industry, where new exterior colors have been created with the pigments produced by EM Industries. Other markets are the plastics, wallpaper and textile industries.

As to the cosmetical use, the RONA PEARL business group is handling this product line. The pearlescent pigments add an iridescent glow to powders, eye shadows, blushers, lipsticks, liquid makeups, nail enamels, cream, shampoos and soaps.

The ADVANCED CHEMICALS DIVISION supplies sophisticated specialty chemicals to a variety of high technology industries. Interesting products include photoresists for the semiconductor industry, liquid crystals for display manufacturers and monocrystals for optical applications. In 1984, EM Industries acquired the OPTOVAC group of North Brookfield, Mass., which is a domestic manufacturer of optical crystals. Optovac's facilities have recently been expanded to accommodate the future growth of this high tecnology business.

The EM SCIENCE DIVISION was initially based on the acquisition of MCB Manufacturing Chemists of Cincinnati, Ohio. MCB is one of the oldest, most respected names in the field of laboratory chemicals. MCB had been able to extend its product offerings with the addition of fine laboratory products from E. Merck, Darmstadt, the largest worldwide supplier of high purity chemicals. MCB manufactures and sells close to 4,000 products for analytical and research purposes in industrial, educational and government laboratories. EM Science has expanded its product line to include HPLC (High Performance Liquid Chromatography) instruments manufactured by HITACHI, as well as HPLC columns and other supplies. In mid-1987, a majority participation in INTERACTION CHEMICALS, INC. was acquired to expand the HPLC column business. Interaction manufactures polymeric HPLC columns and is located in Mountain View, CA.

From 1980 to 1984 EM Science was also, through its Harleco group, involved in the clinical chemistry market. These activities were discontinued and transferred into a new diagnostic company, EM DIAGNOSTIC SYSTEMS, INC., which E. Merck, Darmstadt, formed in the United States with participation of American management.

The FINE CHEMICALS DIVISION in turn supplies a range of high purity chemicals to the pharmaceutical and food industry,

which includes traditional vitamin compounds like Vitamin C, where E. Merck, Darmstadt, is one of the world's largest manufacturers.

Since its inception, EM Industries has conducted clinical research for the Pharmaceutical Department of E. Merck, Darmstadt. These activities have now been concentrated in a new subsidiary, EM PHARMACEUTICALS, INC., which has expanded its facilities and staff to pursue these activities more aggressively. EM Industries is also testing new plant protection products developed by Celamerck of Ingelheim, Germany. □

EIMELDINGEN

EIMELDINGEN Corporation, a wholly-owned subsidiary of Maschinenfabrik Eimeldingen in Eimeldingen, West Germany, was founded in 1979 in Indianapolis, Indiana. Eimeldingen is one of the world's largest manufacturers of ultra-precise rotary machine tool tables. . .dividing, graduating and coordinate tables. . .required for extremely accurate machining, measurement and inspection.

Eimeldingen's internationl reputation for extreme precision is acknowledged and utilized by industries manufacturing aerospace equipment, aircraft, helicopters, automobiles, generators and turbines.

This prestigious international company was founded in 1932 by Stuttgart as a designer and manufacturer of automatic transfer machines. In 1945, a new production facility built in Eimeldingen, West Germany, started manufacturing vises; various tilting and rotary movement workholding pieces—necessary for a retooling industrial nation—resulted from these original vises.

In the 50's when industry required precision measuring and inspection tables, Eimeldingen designed and manufactured rotary and rotary tilting tables to meet these requirements. In the early 1970's, Eimeldingen's rotary machine tool table was interfaced with other industrial operations, including numerical control capabilities. This served to open the OEM market for Eimeldingen precision rotary tables, which were being widely used for production purposes; since 1975, nearly 80% of all Eimeldingen products have been used in a production function, with sales to all Western countries.

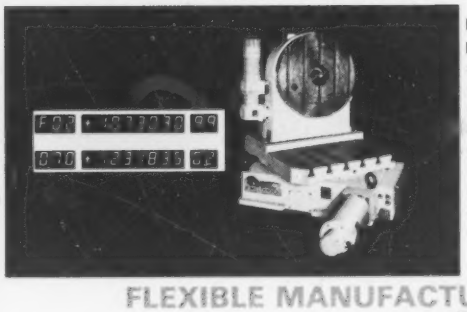
Eimeldingen Ltd. was opened in 1977 as a sales and service facility to accommodate Great Britain and the British Isles. Eimeldingen/Indianapolis was established in 1979 to provide the international firm with yet another manufacturing facility. Eimeldingen provides exceptionally qualified design and electronics personnel to build custom rotary machine tool table orders to the most exacting specifications. In 1983, Eimeldingen introduced Flexible Manufacturing System (FMS) and FMS components for parts machining, loading and handling applications. Eimeldingen FMS components and systems provide an automated, continuous flow of parts to and from various production operations, such as machining centers and vertical turret lathes.

SIP machining centers—recognized worldwide as the leader in precision machining centers—in combination with technically qualified personnel make it possible for Eimeldingen/Indianapolis to provide the United States market with the same precision industrial manufacturing equipment as that built in Europe. □

APPLICATION PROVEN PERFORMANCE

EIMELDINGEN
INDIANAPOLIS

PRECISION MACHINE TOOL TABLES

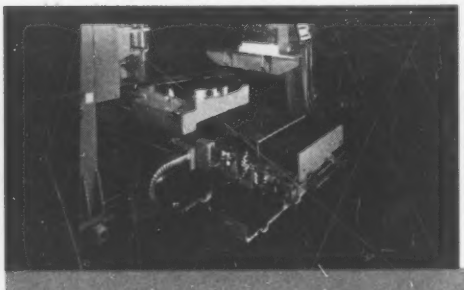


Eimeldingen provides several approaches toward precise work-piece positioning:
- Dividing, graduating and coordinate tables
- Horizontal, vertical and fully inclining tables
- Mechanical vernier, optical or digital readout
- Numerical control and automatic indexing
- Motorized rapid traverse combined with manual positioning, or infinitely variable-speed drive
- Accuracy: from ± 20 sec. of arc to ± 1 sec. of arc
- Sizes: 8" to 160"; larger sizes upon request
- Capacity: to 80 tons and over

FLEXIBLE MANUFACTURING COMPONENTS

Eimeldingen FMS components provide a fully-automated flow of parts to and from machining operations:
- Interface directly with most existing or new horizontal & vertical machining centers & VTLs
- Machines of different manufacturers with different capabilities can be integrated to form a fully-automated machining cell
- Installation involves minimum machining production downtime . . . without touching the interior mechanics of the machine itself

SPECIAL APPLICATION EQUIPMENT



The name EIMELDINGEN has been synonymous with precision production instruments to more than 20 markets . . . worldwide . . . for over 30 years. Eimeldingen also designs, manufactures and installs special application equipment—to exacting customer specifications. The photo shows an Eimeldingen motion system designed for the aerospace industry; the system is precise to 5 arcsec. in rotation and to 40 micrometers in elevation and translation. Contact EIMELDINGEN/Indianapolis to discuss your special application equipment project.

EIMELDINGEN CORPORATION
302 SOUTH HARDING STREET • INDIANAPOLIS, IN 46222
PHONE: (317) 638-0298 • TELEX: 276117

FAG

FAG BEARINGS CORPORATION is an international organization whose trademark is a worldwide symbol of quality and depend-

ability in the design and manufacture of bearings in all sizes and configurations. FAG is recognized as the signature of one of the world's oldest and largest manufacturers of precision ball and roller bearings. Since 1883 FAG has led the way in the development and refinement of bearing design and technology. Today, FAG employs over 29,000 people in branches and affiliate plants in the U.S.A., Canada, Brazil, Germany, Austria, Switzerland and Portugal. There are, in addition, FAG sales and service offices and distributors in more than 100 countries.

FAG headquarters in the U.S.A. are located in Stamford, Connecticut, where a full complement of administrative, marketing, engineering and distribution personnel service the American market. The chief U.S. production facility is in Joplin, Missouri. After undergoing extensive expansion, the Joplin plant has been producing an extended range of bearing types in sizes hitherto never produced in the U.S. FAG's capabilities in bearing design and manufacturing are second to none. From automobiles to steel furnaces, farm machinery to spacecraft, FAG is ready to provide bearings, housing, accessories and components, whatever and wherever the need. □

Feralloy CORPORATION

FERALLOY is a pioneer in the steel processing industry. More than thirty years ago, Feralloy began operations in Chicago with one coil slitting line and a large commitment to customer service. Today, Feralloy serves the steel processing requirements of the entire United States through seven processing facilities which are located in:

- Chicago, Illinois
- New Castle, Delaware
- Birmingham, Alabama
- Granite City, Illinois
- Cleveland, Ohio

and Feralloy's new company is:

- Feralloy West Company, Pittsburg, California & Fontana, California

Feralloy of today is one of the largest, most experienced steel processing companies in the country and is a major supplier of processed flat-rolled steel in either slit coils or cut-to-length sheets from master coils held in our inventory under a stocking program scheduled with our customers. Feralloy plants are conveniently located to supply "just-in-time" our customers with prime steel at competitive prices.

During the past years, Feralloy has invested heavily in new equipment as well as in new plants near San Francisco and Los Angeles. The recent investments have been particularly focused on our objectives to strengthen quality assurance. Because Feralloy is committed to its customers LONG-TERM, investing in quality equipment certainly is part of our success.

During the past thirty years, Feralloy has established the credibility necessary for a supplier to become an integral part of the customers' production operations.

Feralloy has a commitment to customer service and dedication to respond to customer requirements. Supported by the financial strength needed to carry inventory and provide modern facilities, Feralloy has earned an excellent reputation based upon integrity. □

First Boston

THE FIRST BOSTON CORPORATION, headquartered in New York City, is a full-service international investment bank. As financial intermediary, we are in constant contact with both the suppliers and users of capital worldwide; moreover, we strive to be consistently creative in our approach to meeting their financial and strategic objectives. Our market making and trading activities cover the complete range of securities of corporations, financial institutions, and governments and their agencies, 24 hours a day. We seek to offer not only innovative ideas for raising capital and solving complex financial problems, but also to provide unparalleled resources for executing transactions.

First Boston established a unique affiliation in 1978 with Credit Suisse First Boston (CSFB), a leading London-based merchant bank. Together, First Boston and CSFB offer comprehensive international investment banking and securities trading services. First Boston and CSFB are consistent leaders in raising capital worldwide, as well as a dominant trading force in the world capital markets. Through our alignment with CSFB-Effectenbank in Frankfurt, we are the only U.S. investment bank also to offer unlimited flexibility in meeting the particular needs of German and non-German companies in the DM-denominated securities market.

First Boston also provides specialized corporate finance advisory services. First Boston's "German Desk"—established in 1981—tailors its comprehensive capabilities for our expanding German client base. For example, First Boston is preeminent in merger, acquisition, takeover defense and divestiture activities. Over the past eight years, we have assisted domestic and international clients in transactions exceeding $160 billion in value, including both large and small assignments and discreet advisory projects. First Boston's Project Finance Group—the first of its kind on Wall Street—has worked on more than 300 domestic and foreign project assignments, and raised more than $16 billion for projects in all relevant world capital markets.

In total, we leverage our expertise and presence in the world's capital market to the benefit of each client by capitalizing on opportunities whenever and wherever they occur. □

Messe Frankfurt

Of the fairs and exhibitions organized in Frankfurt, twelve are the largest in the world in their respective fields. These classic events offer the total range of the latest products and developments worldwide. While the concept of the large fairs is constantly adapted to the changing demands of economic developments, research being conducted by MESSE FRANKFURT over the past years has shown that specific market needs are only being met by special-interest fairs. During the past three years 14 specialised fairs have been added to the fair programme—mainly in the high-tech and communication sectors—and many other topics in clearly defined areas are on their way.

In 1988, at least 25 fairs and exhibitions will be held in Frankfurt. The various events may be classified into four major categories:

1) Textile Trade Fairs:

In 1988, there willl be *heimtextil* in January and *interstoff* in April and October. The new special-interest fairs *Techtextil* and *format* will be staged again in 1989.

2) Consumer Goods Fairs:

The Frankfurt International Fairs Spring and Autumn will be on in February and August, 1988.

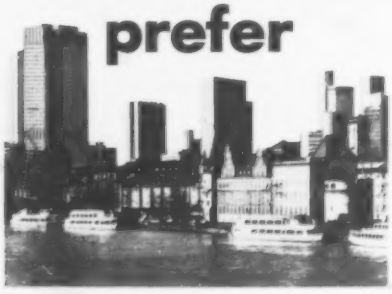
3) Capital Goods, Investment and Technology Fairs:

The most prominent fairs in this area will be the Music Fair in March, the *Achema* in June and the *automechanika* in September, 1988.

4) Fairs for Communication and Information:

In May 1988, *Infobase, Micro-Computer*

Companies on the move prefer



Frankfurt.

Companies on the move know from experience that the chances of doing business profitably are greatly improved if they operate from a base that is also on the move – where decision-making comes naturally.

That's why so many domestic and international companies have selected Frankfurt, West Germany's financial and commercial capital.

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Wirtschaftsförderung Frankfurt GmbH
Klaus Rittershaus and Dr. Klaus Kröll
Managing Directors
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US GES

and *Pro-Sales* will be on in a joint fair presentation.

International Meeting Place

International trade fairs in Frankfurt have a very significant proportion of international exhibitors, giving a comprehensive overview of the products and services offered by many competing countries. This in turn invites trade buyers from all over the world creating a really international meeting place.

Business overseas

The increasing internationalization of markets has caused Messe Frankfurt to introduce new marketing strategies for overseas. *Interstoff* was successfully participating in the New York Fabric Show in 1986 and 1987. In November, with 120 exhibitors, *interstoff Asia* was organized for the first time in Hong Kong.

Construction Programme

The fair ground's center and western sections were renovated during the first half of the 1980s at a cost of 750 million DM (approx. US $370 million). In the eastern section, the new hall 1 and the Frankfurt Trade Fair Tower, which will be the tallest building in Europe, are currently under construction. The office tower will rise about 840 feet above the city's trade fair grounds. About 570,000 square feet of office space will be available in the tower's 54 stories. The tower can be named a symbol of the importance of trade fairs in Frankfurt, its considerable size equaled only by the large role that trade fairs have played in Frankfurt's history. The city was one of the first in Europe to receive a charter permitting it to hold trade fairs and has been doing so since the mid-13th century. Seven and a half centuries later, Frankfurt is still a thriving trade fair center. In 1987, over two million visitors viewed the products of more than 26,000 exhibitors at over 30 fairs; including special events and congresses far over three million visitors came to the Frankfurt fair ground.

Ever increasing attendance from North America

With almost 6,800 buyers, 1986 saw the largest ever number of visitors crossing the Atlantic from North America to visit events organized by Messe Frankfurt (1985: 5,300; 1981: 3,000). Approximately 5,150 of these visitors came from the USA and 1,650 from Canada. At the same time, over 800 exhibitors from the USA travelled to guest events and events organized by Messe Frankfurt, and 170 from Canada. The calculation for 1987 not being totally finished, the tendency seems to be perpetuating.

Interesting in this connection is the fact that in 1986 some 40 per cent of all American and Asian exhibitors who set up their stands in the Federal Republic of Germany did so in Frankfurt (from America 851 out of 2,170 firms, from Asia 1,153 out of 2,972 companies).

For information please contact: Mr. Philippe Hans, German-American Chamber of Commerce Inc., 666 Fifth Avenue, New York, N.Y. 10103, Tel. 212 974-8856, Telex: RCA 234 209 GACC UR. In Frankfurt, please contact Astrid Bujara, Tel: (069) 7575 6893. □

FRANKFURT AM MAIN

West Germany, with a population of nearly 62 million people and the fourth largest GNP in the world, is one of the leading economies in Western Europe.

At the heart of West Germany's dynamic economy is **FRANKFURT AM MAIN**, the nation's financial, commercial and distribution center. There are 380 credit institutions in Frankfurt, and more foreign banks than in any other Continental European city—some 240, including 38 American banks.

Frankfurt is also the home of the Deutsche Bundesbank, West Germany's central bank, as well as the nation's biggest stock exchange.

It is a city with a highly sophisticated infrastructure providing all the facilities necessary for innovative decision-making: adequate space; comprehensive legal, tax and financial services; the full range of communications capabilities; a highly skilled workforce; vast market potential; the most modern transportation facilities; a business atmosphere that rewards resourcefulness.

Electronics, chemicals, and engineering are the main manufacturing industries. A healthy mixture of manufacturing and service industries combine with the main service sectors of trade, transportation, communication, banking, finance and insurance to comprise Frankfurt's highly diversified economy.

Frankfurt is the economic and distribution center of the Rhine-Main Region, which has a population of nearly 2.5 million and a workforce of 1.2 million. It is the second largest urban concentration in West Germany and one of the fastest growing areas of Western Europe.

Finally, Frankfurt is clearly the transportation hub of West Germany. Its central location puts it in the mainstream of the country's efficient air, rail, road, and waterway networks which, in turn, provide direct, fast access to all key domestic, West European and overseas markets. □

MERCEDES-BENZ TRUCKS

FREIGHTLINER TRUCKS

FREIGHTLINER CORPORATION, headquartered in Portland, Oregon, is the fastest growing truck manufacturer in the United States. It holds the Number 2 nameplate in the American trucking industry—up from Number 8 in 1977.

The company produces and markets heavy-duty (Class 8) Freightliner trucks and medium-duty (Class 6/7) Mercedes-Benz trucks for North America and is a wholly-owned subsidiary of Daimler-Benz AG of West Germany, the world's largest commercial vehicle manufacturer.

The company has pursued an aggressive product development program to increase its participation in the North American market.

In 1985 it introduced two new vehicles: the company's first heavy-duty, medium-length conventional Freightliner tractor and its new Class 7 Mercedes-Benz cab-over-engine tractor.

In 1986, Freightliner entered the construction market with a family of new straight trucks and special duty tractors called the *Hard Hat Series*, and its subsidiary, Mercedes-Benz Truck Company, unveiled two new cab-over-engine straight trucks that broadened its line in the medium-duty truck market.

This year, the company unveiled the Freightliner Raised Roof C.O.E. (cab-over-engine) tractor, featuring a build-in aerodynamic roof flairing and walk-in sleeper with double bunks. And, it introduced, as the first U.S. truck manufacturer, the Freightliner/WABCO anti-lock braking system, a product option for Freightliner trucks designed to enhance vehicle stability and steerability during braking.

The company sells and services its products through a network of more that 300 Freightliner and Mercedes-Benz truck dealers in the United States and Canada. Dealers are backed by six regional sales and sevice offices and eight parts distribution centers strategically located to serve customers throughout North America.

Together with its subsidiary, Mercedes-Benz Truck Company, Freightliner Corporation has production facilities in Portland, Oregon; Mt. Holly and Gastonia, North Carolina; Hampton, Virginia; and Burnaby, British Columbia. The company also has a technical engineering and design center in Charlotte, North Carolina.

Freightliner's origin dates back to the late 1930's when Leland James saw the need for a specially designed truck to meet the demands of long-distance hauling. James had formed Consolidated Freightways in 1929 and needed a lighter, stronger and more economical truck to pull bigger loads. Although he began crafting the first Freightliner aluminum body panels in 1939, it wasn't until after World War II that James joined forces with four other truck builders to pioneer the design and manufacture of the first cab-over-engine tractor.

Freightliner became the industry leader in truck innovation and design, creating the all-aluminum cab, the aluminum integral sleeper and the first 90-degree tilt cab. In addition, the company spurred the application of the diesel engine for over-the-road use. Freightliner built its first conventional tractor in 1974.

In 1981, Daimler-Benz AG bought Freightliner Corporation from Consolidated Freightways, and a year later merged its Mercedes-Benz Truck Company with Freightliner, placing Daimler-Benz' North American commercial vehicle manufacturing and marketing operations under one corporate umbrella. Today, Freightliner is the second largest producer of heavy-duty trucks in America. □

Frenkel & Co. Inc.

FRENKEL & CO., INC. has been a leader in the field of Commercial Insurance and Risk Management for over one hundred years.

We have enjoyed a healthy growth based on a philosophy of being large enough to provide an in-depth approach to corporate insurance problems and small enough to do this on a personal basis. Our many long-term relationships are testimony to the bonds of trust that have been formed through years of dependable service.

Our Risk Management professionals analyze and evaluate exposures to loss and design comprehensive insurance packages specifically tailored to our individual client's needs. We provide safety and fire prevention consulting services. We work closely with our clients to reduce potential loss to property and to personnel. Our Claims Division facilitates prompt and satisfactory settlement of claims. Rounding out the full range of brokerage services are experts in Employee Benefits and Estate Planning.

Through a network of domestic and foreign insurance underwriters, we arrange protection at competitive costs for exposures covering all facets of property, casualty, marine insurance and surety.

Insurance requirements of American subsidiaries of German companies require specialized, in-depth knowledge of German business practices, needs, and relationships as well as an understanding of the insurance marketplace in Germany.

We are particularly proud of our association with our many German-American clients. We can work directly with U.S. subsidiaries of a German parent and equally well in conjunction with a captive broker, risk manager or an independent correspondent broker located in Germany.

You can contact us by calling or writing Mr. Martin L. Elkinson, Executive Vice President, Frenkel & Co., Inc., 123 William Street, New York, New York 10038, telephone (212) 267-2200. □

GARRETT

THE GARRETT CORPORATION, with 21 divisions, subsidiaries and associated affiliates worldwide, designs and manufactures systems, products and components for the aerospace, energy management, undersea propulsion, and surface transportation fields.

Founded in 1936 by the late J.C. "Cliff" Garrett as a small supplier of aviation accessories, The Garrett Corporation—today a unit of Allied-Signal Inc.,—has evolved into an industrial complex of more than 23,000 employees.

Typical of the company's far-flung international operations is Garrett GmbH in Raunheim, West Germany. With some 549 employees, Garrett GmbH is involved in developing and producing the auxiliary power units (APUs) featured on the new Airbus Industrie A320 jet airliner, and other Airbus aircraft. Garrett GmbH also manufactures APUs and ground support equipment for many other makes and models of commercial and military airplanes, builds generator sets for industrial applications, and overhauls and repairs a variety of Garrett products.

Most Garrett products involve the use of very-high-speed rotating machinery, heat-transfer technology, and electronic, hydraulic and pneumatic control technology.

As a leading supplier of propulsion engines for general aviation and the world's regional airlines, Garrett produces the TFE731 and ATF3 turbofan engines for jet aircraft, and the TPE331 engine for turboprop airplanes. In addition, the company has developed its F109-

GA-100 turbofan engine to power the next generation U.S. Air Force trainer, and is developing two other new aircraft engines as joint ventures. One is the turboshaft T800, a project of the joint Garrett/Allison Light Helicopter Turbine Engine Company (LHTEC), designed to power the U.S. Army's new LHX helicopters. The other is the CFE738, a turbofan rated at 5,600 pounds of thrust, and being jointly developed by Garrett and the General Electric Company's Aircraft Engine Business Group.

Environmental control and cabin pressurization systems for aircraft represent still another major Garrett product line. These systems, which Garrett pioneered, are being produced for more than 75 different types of U.S. and foreign military aircraft, and some 35 models of domestic and foreign civil airplanes.

Garrett also produces a wide variety of electronic systems for the aerospace industry. These include air data computers, area navigation systems, emergency locator transmitter-receivers, thick and thin film hybrid microcircuits, and flight management systems.

In addition, the company manufactures industrial regenerators and recuperators, nuclear-biological-chemical (NBC) protection systems for military vehicles and aircraft, castings for turbomachinery, pneumatic and hydraulic motors and actuators, and is also deeply involved in such diverse fields as underwater propulsion and ceramics research. □

Insurance cover, in the eyes of GERLING-KONZERN, is an essential production factor in industry. Insurance makes a reduction of risks possible and allows their estimation. The necessity is, however, to develop policies, which are tailored to the specific requirements of the individual enterprise.

Gerling-Konzern has been a specialist insurer of industry risks for more than 80 years breaking ground for others in the field. Technological progress, as increasing concentration of major values, expanding capital investments and changing patterns of risk compel enterprises to adapt their protection to constantly growing and more complex risks. Elaborating solutions that are accurately tuned to the needs of an enterprise is one of the strong points of the Group.

The development of new ideas and research of causes of loss which contribute to avoiding claims and disasters have won Gerling-Konzern international acclaim. Four consulting institutes

- the Gerling World Institute for Risk Consulting plus Safety Management,
- the Gerling Institute for Loss Research and Loss Prevention,
- the Gerling Institute for Risk Management and Risk Consulting,
- the Gerling Institute for Company Pension Plans

make the most up-to-date knowledge and expertise in risk management, loss research and loss prevention available to the Group's clients.

Thanks to its innovative power Gerling-Konzern today is a sought-after and recognized expert insurer—not only in Germany—of industry risks who provides solutions to all safety problems of industry and entrepreneurs.

For more than 30 years, the Group has been represented by its foreign organization as a direct insurer and reinsurer in all major industrialized countries. Local experts and specialists are familiar with the practice and customs of their respective markets.

The consolidated premium volume of the Group attained nearly DM 5 billion in 1986. More than DM 1 billion of this amount was contributed by foreign business. Its structure makes the Gerling foreign organization particularly suitable for handling the insurance needs of enterprises with international activities.

Wherever in the world a company does business, Gerling can be an indispensable partner. □

GOLDMAN, SACHS & CO., a full-service, international investment banking and brokerage firm, serves major corporations, institutions, governments and private investors throughout the world. The firm was founded in 1869 and is one of the oldest and financially strongest of the major Wall Street organizations. The firm has offices throughout the U.S. and in London, Tokyo, Hong Kong, Toronto, Zurich and Paris. Our major global capabilities include:

- A leading position in managing and co-managing global public financings and in arranging placement in the private equity and debt markets. Our distribution network includes over 5,000 institutions and a substantial base of private investors.
- Trading and market making around the clock in major international equity and debt securities. Surveys of institutional investors repeatedly confirm Goldman Sachs' leadership in providing the best overall investment services. We are the number one block trading firm on the New York Stock Exchange, and we are in the forefront of executing major portfolio restructurings for pension funds and other large institutions internationally.
- Acknowledged excellence in global research. Our equity research analysts continuously follow 55 industries and over 800 companies around the world. Our international economics research team in London had earned top ranking for foreign exchange and international economic research in a leading survey of U.K. investment managers. Our expertise in global research is also exemplified by our major role in producing the *FT-Acturies World Indices*,™ the first globally investable share price indices, published daily in *The Financial Times*.
- Preeminence in advising corporations on mergers and acquisitions and in defending against hostile takeovers.
- Continuing leadership in the financing and sale of major commercial real estate properties in the U.S.
- Expertise in using innovative financial products to manage stock market, interest rate and foreign exchange volatility, obtain lower cost financing and improve investment returns. We are a leading participant in growing international markets for stock index, financial and currency futures and options as well as interest rate and currency swaps. We are the only investment banking firm to be ranked in the top tier in a major foreign exchange survey of corporate treasurers internationally.
- Prominence in trading and hedging in precious metals and crude oil and petroleum products. Our J. Aron Currency and Commodity Division is a primary market maker and one of the world's largest dealers in gold, silver and platinum group metals, serving industrial users, central banks, monetary authorities and financial institutions. It is also one of the world's leading crude oil trading companies.

Underpinning Goldman Sachs' ability to offer superior performance on a global scale is its commitment to client relationships and a team approach to service. Our professionals

are oriented toward planning and executing financial strategies that serve the long-term interests of our clients. This is a principal reason we have so many long-term relationships. The teamwork for which Goldman Sachs is noted assures that the worldwide resources of the firm are available at all times to help clients succeed even in the most challenging circumstances. □

HANIEL

Duisburg-based FRANZ HANIEL & CIE. GmbH is an oldline service and trading company that was founded in 1765. Its headquarters in Duisburg—built 231 years ago under a special grant from Frederick the Great of Prussia—today stands in the center of a beautifully landscaped park. The company at this point is very strongly diversified and divided into 12 divisions according to market orientation with 212 subsidiary companies.

More than two centuries after its founding, Haniel today operates on a global scale in many different businesses. Among others: manufacture and sale of construction materials; trade in combustible materials, fuels and lubricants; barge and coastal shipping, trucking, trade; recycling and refining of raw materials for the specialty steel industry; technical services for industrial pollution control; pharmaceutical wholesale; mail order sales and international trade, express delivery systems as well as food wholesale and retail trade in the United States (Scrivner Inc., Oklahoma City).

In 1986, Haniel registered total revenues of DM 10,417 billion. The decline from the previous year (DM 12,558 billion) was basically attributable to the strong decline in the value of the dollar. On the other hand, net after taxes grew from DM 69 million to DM 75 million. After a dividend payout of 9 percent from its DM 200 million capital base, DM 57 million remained for strengthening the equity capital base and for investment in the firm.

The 1986 Annual Report contains comprehensive information about the firm and its diverse services and trading activities. It may be obtained from Franz Haniel & Cie. GmbH, Stabsabteilung Information, Franz-Haniel-Platz 1, 4100 Duisburg-Ruhrort. □

Hapag-Lloyd

This year HAPAG-LLOYD AG, one of the world's largest shipping companies, celebrates its 18th Anniversary. The Hamburg Bremen-based company is represented in the United States by its North American subsidiary, Hapag-Lloyd (America) Inc., New York City.

Though they are indeed proud to have completed 18 years of service, the heritage at Hapag-Lloyd goes back to the days of sailing ships. And as for celebrations, both the Hamburg-American Line (HAPAG), founded in 1847, and North German Lloyd, founded in 1857, have each separately toasted milestone 50 and 100 year anniversaries.

But the sum for these eighteen years as a joint Hapag-Lloyd entity adds up to much more than eighteen years of success. The strategic consolidation and streamlining at the beginning of the 1970's was followed by another belt-tightening and fat trimming program in the early 80's. The events and achievements of each of the last eighteen years have brought Hapag-Lloyd closer to its goal: to provide the most advanced network of transport services on the sea, land, and air. . .and to do so on a sound financial basis.

With its heritage on the sea, the birth of the new company came at a time when containerization was also in its infancy. Indeed, the merger of Hapag and North German Lloyd was brought about as a result of the high capital investment needed to convert to containerization. Both Hapag-Lloyd and containerization grew together to be strong and healthy in the past 18 years.

Before the 70's even began, Hapag and North German Lloyd had engaged in the first fully containerized service on trans Atlantic routes under the trade name Hapag-Lloyd Container Line. By 1978, the first generation containerships of the late 1960's yielded to newer, more modern 1758 teu vessels to meet the demand for additional cargo space. Then in 1985 these four vessels were jumboized by adding a mid-section, thereby, increasing their capacity to 2486 teu's. Hapag-Lloyd's containership fleet, which began as four in 1968 grew to 18 by 1978, and today stands at 29.

Hapag-Lloyd travel organization, called Hapag-Lloyd Reisebuero, today operates with 77 travel agencies throughout the Federal Republic of Germany, West Berlin, Austria, Luxemburg, Switzerland and the United Kingdom. All aspects of corporate and private travel services are offered. Growth of this sector of North America is reflected in the establishment of Hapag-Lloyd Travel (America) Inc., with travel agencies in New York, Atlanta, Charlotte, Chicago, Hackensack, N.J., Philadelphia and Great Neck, Long Island, N.Y.

To meet the demand for larger cruises and more exotic destinations, Hapag-Lloyd introduced a new "Europa" in 1979. The old Europa, which had served more than 170,000 passengers for over a decade, was phased out of operation.

On the land, Hapag-Lloyd has made great inroads since 1970. Where overland container movement was in its early stages at the beginning of the decade, Hapag-Lloyd has made true door-to-door service a reality. Through the effective use of container pools, shipping agents and inland container coordinators, today Hapag-Lloyd has containers totalling around 100,000 TEU's in operation worldwide.

Throughout the past 18 years in Europe, Deutscher Container-Dienst (DCD) has coordinated inland container movements by truck and rail.

In the late 1980's, in the United States, Hapag-Lloyd has surely broadened the already wide horizons that its predecessor companies had established. □

"I learned the hard way", said Hans A. Middelberg of HELIKON, looking back to a successful career of almost 30 years in construction and real estate; he started as an apprentice in 1958 and worked in West Germany as Diplom Ingenieur in the construction field until 1974, before entering the real estate sector in both Germany and the U.S. His entrepreneurial sense combined with solid knowledge about details and his personal management skills made his numerous real estate, building, and partnership ventures in Germany and the US a great success.

It is not easy to get things accomplished in an environment of overregulation and red tape. His architect complains about an impatience when he pushes to get a new building out of the planning stage. His attorney wants to hire him as legal assistant because of his detailed suggestions on how to get an offering plan approved by the Attorney General's Office. Construction and real estate consult-

ing clients appreciate his investigations *à la* Sherlock Holmes.

"It is a jungle out here compared to Germany", referring to the real estate market in the New World, whether it is in Canada, the U.S. or Australia (where he recently started his first real estate project). "You see a lot of beautiful and big trees—but watch out for some rotten roots. However, most problems with real properties can be cured with knowledge, care and continuous personal involvement". His partners in various projects are quite happy about their real estate ventures with a return between 40% and 85% on their investment over a period of two to three years. That's what counts.

His outlook for the future: "Short-term real estate gains will be more difficult to achieve, especially in an era when tax reform and volatility of the market makes cash flow more important". Therefore he is advising his friends to look for long-term solid real estate investments here and abroad. □

Helaba Frankfurt
Hessische Landesbank -Girozentrale

Headquartered in Frankfurt and an integral part of the city's domestic and international banking community, HESSISCHE LANDESBANK, with total assets at the end of 1986 of more than DM 69 billion, is one of Germany's top 10 banks.

Hessische Landesbank is a major German universal banking institution, focusing on wholesale banking and offering a comprehensive range of financial services geared to the needs of large corporations, governments and government entities, and other financial institutions. These services include:

- International financing, specializing in medium to long-term fixed-rate loans for subsidiaries of German customers abroad and for the German subsidiaries of foreign multinational corporations.
- Foreign trade financing, including medium to long-term fixed rate export financing, short-term import-export financing at domestic and Euromarket rates, and non-recourse export financing.
- International commercial services including rapid payments, collections, and letters of credit. The Bank is a member of S.W.I.F.T.
- Providing foreign exchange facilities for the Bank's own customers and those of Hesse's Sparkassen. Hessische Landesbank is a market maker for its worldwide correspondents in spot and forward foreign exchange transactions and in Eurocurrency deposits.
- International capital market services, including Eurobonds, private placements, and foreign share placements. The bank offers a full range of brokerage facilities, such as investment counselling and portfolio management.
- Specialized financial services for corporate clients in foreign exchange, deposits in all major currencies, as well as interest rate swaps and other innovative financial vehicles.
- Euromarket facilities are made available through a wholly-owned Luxembourg subsidiary, Hessische Landesbank International S.A., as well as full service branches in New York, London and Grand Cayman—which, together with an active global network of correspondent banks, provide Helaba's customers with a broad range of international services.

Hessische Landesbank's shareholders are the State of Hesse, for which it acts as banker, and the fifty-two regional Sparkassen, for whom it provides clearing and other centralized functions. □

Hoechst

The HOECHST CELANESE CORPORATION, Routes 202-206 North, Somerville, NJ, (201 231-2000) a wholly owned subsidary of Hoechst AG, ranks as the largest and fastest-growing subsidiary of the Hoechst Group.

Hoechst Celanese was formed in February 1987 with the merger of American Hoechst Corporation of Somerville, NJ, and the Celanese Corporation of New York, resulting in a company that had combined sales of $4.5 billion in 1986. American Hoechst began business in the U.S. in 1953. Celanese Corporation dates from 1918. Hoechst and Celanese have been joint-venture partners in Europe since 1962.

With net earnings of $88 million on net sales of $1,876 billion for the first six months of 1987, Hoechst Celanese now ranks as the fifth largest company in the U.S. chemical industry, and in the top 100 in the Fortune 500, based on 1986 sales.

Hoechst Celanese produces a wide range of products: pharmaceuticals, diagnostic agents, fibers, film, information technology and chemicals—used to meet such basic human needs as food, health, clothing and shelter, as well as serving modern society in the areas of communications, transportation, security, leisure, energy, information transfer, technology, and life enrichment.

Hoechst Celanese Corporation operates chemical, man-made fibers, plastics, agricultural products and pharmaceutical divisions at 37 business sites in the United States, from Rhode Island to Texas. Hoechst Celanese holds a 56.2 percent interest in Celanese Canada Inc., which operates chemical, textile and industrial fiber plants.

Hoechst Celanese maintains research facilities in New Jersey, North Carolina and Texas, where Hoechst Celanese conducts extensive research, spending over $170 milllion each year to improve the quality of people's lives. Supporting this research, the Hoechst Group worldwide spends approximately $4 million on research each business day—more than $1 billion yearly.

The fibers businesses produce materials such as polyester staple and filament fibers used for apparel, carpeting, home furnishings, and an increasing number of industrial applications. The latter include high-denier polyester fibers for tire cord, industrial fabric and rubber-related uses, including a wearable fabric with permanent flame resistance, a geotextile that can be applied in the areas of soil stabilization and roofing, resins for containers and other applications, filter products, teabag and cigarette filter fibers, monofilament polyester for such items as zippers, various products for the paper industry, low-denier polyester fiber for sewing thread, and fibers for non-woven medical and hygienic products.

Hoechst Celanese chemicals group operates three major plants, all in Texas, producing more that 40 organic petrochemicals. The company is the leading or second largest producer of acetic acid, formaldehyde, pentaerythritol, acetaldehyde, vinyl acetate and methanol.

The engineering resins business manufactures specialty plastics found in the home, in autos and in a wide variety of consumer products that require durability and safety.

Hoechst-Roussel Pharmaceuticals, Inc., produces pharmaceuticals that have made significant contributions to medical progress in recent years. Products such as: Lasix® diuretic; Topicort® topical corticosteroid emollient cream; Streptase® fibrinolytic agent; Claforan® third-generation cephalosporin antibiotic; Loprox® broad-spectrum antifungal; Diabeta® oral hypoglycemic agent; and Trental® hemorleologic agent. □

HOESCH

For over a century, the name "HOESCH" has been synonymous with the steel world. Started as a family business in 1871, Hoesch has grown into one of the most important German producers of steel and steel finished products.

Many contributions to technical progress, especially in the fields of metallurgy of iron and the production and processing of steel, as well as strong impetus to industrial development and marketing growth mark the path of this company up to the present time.

Our products range from semi-finished steel to rolled steel in all grades, such as sheets and plates, bars, sheet piling and mining sections. Our processed steel include such coated products as galvanized, plastic-coated sheets and tin plate; special sections, steel strapping, pipe and tubing, as well as castings and forging. Hoesch is an important factor in the manufacturing of machinery and heavy equipment.

With all this capability, it was only natural that the Hoesch group expanded its activities worldwide, and today has offices and representatives, as well as manufacturing plants, in every major country in the world.

Hoesch America Inc. was started in the U.S. in 1957 and the main purpose was to cover an important market for the Hoesch group. Over the years it led to a steady growth of international trading, including exporting from the U.S. to various countries in the world. Hoesch America became a significant member of the international steel community.

In the 1960's Hoesch decided to further invest in the U.S. and today owns several successful manufacturing plants.

Hoesch Tubular Products Co., Baytown, TX is engaged in upsetting, heat treating and threading of oil country tubular goods. The plain end tubular goods in sizes 2.3/8" through 13.3/8" are manufactured at the Hoesch pipe mill in Germany, imported into the U.S. finished at Hoesch Tubular Products and sold in the U.S. for oil drilling.

Delta Strapping Industries, Inc., New York, NY is a manufacturer of plastic strapping tools and seals, and distributor of steel strapping and accessories.

Rotek Inc., Aurora, OH is a manufacturer of bearings, seamless rolled rings and carriage parts, as well as closed die forgings, which are sold to equipment manufacturers of cranes, excavators, dredgers, railway turntables, rotary furnaces, material handling equipment and similar heavy-duty equipment. □

PHILIPP HOLZMANN

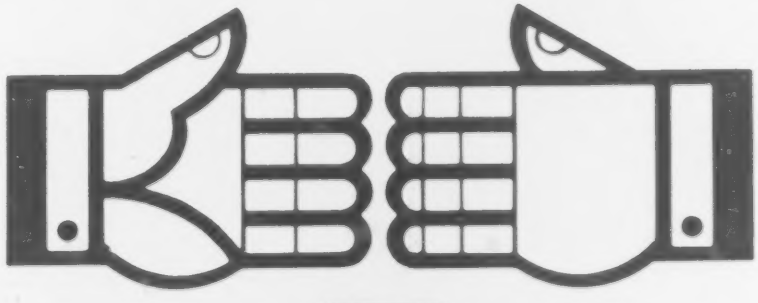
Aktiengesellschaft

PHILIPP HOLZMANN AG has grown from a small family business into a worldwide leader in the construction industry. The firm was founded as a railway contractor near Frankfurt am Main in 1849 but quickly extended its activities to include civil engineering and building of all types. Holzmann received its first major contract outside Germany, the main railway station in Amsterdam, in 1882, and since then has been active in many European countries, South America, Asia, and Africa.

Philipp Holzmann AG is one of the largest international construction companies in the world. The company designs and erects public and commercial buildings, manufacturing and technical plants, marine structures, mass transit facilities. Holzmann's range of services includes turnkey projects which involve the planning and installation of all building and mechanical equipment. Holzmann undertakes reconstruction and modernization of buildings and technical plants and can provide a full range of purchasing services at the client's request.

If you need insurance for your German-American business, we'll give you a hand.

Because we know German-American business like the back of our hand.



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The general mangement and overseas departments of Philipp Holzmann AG are headquartered in Frankfurt. The company operaties thirty branch offices throughout Germany and has more than 50 domestic and foreign subsidiaries engaged in special fields of construction around the world.

Holzmann is represented in the United States by the Jones Group of companies headquartered in Charlotte, North Carolina, Lockwood Greene Engineers, Inc. in Spartanburg, South Carolina, and other construction related subsidiaries. Jones is among the leading companies in building construction, and Lockwood Greene plans all types of engineering projects.

In 1986, the Holzmann group of companies had sales of 6.6 billion DM worldwide. Approximately 48% of that total is in the United States. □

huls

HUELS AG, one of the largest chemical companies in the Federal Republic of Germany, is a major manufacturer of basic chemicals, organic chemicals, thermoplastics, elastomers and raw materials for surface coatings with production sites in Europe, Japan and U.S.A. Huels' broad diversification, high standards of quality, and intensive research and development has yielded new markets for a growing range of special products for high performance applications.

In 1986, Huels AG had 15,000 employees and sales of 5.5 billion DM. The products are exported to 110 countries, through a worldwide sales network. Exports account for 49.5%.

Huels AG is a 100% owned subsidiary of VEBA AG, one of the leading companies in the Federal Republic of Germany. VEBA activities span electricity, trading, oil exploration and refineries. The chemical activities of VEBA AG are concentrated in Huels.

On 1 May 1985, Huels acquired Nuodex Inc. of Piscataway, N.J./USA. In doing so, Huels was pursuing its strategic objective of product and geographical diversification, with high added value products sold to broad-based industrialized markets.

Nuodex Inc. produces colorants, coatings additives, synthetic lubricants, plastics additives and rigid vinyl film, at sites in the U.S.A., Canada and The Netherlands.

Nuodex Inc. has assumed responsibility for the sale of special products of Huels AG in the U.S.A., and Canada. □

INA

INA BEARING COMPANY, INC. is part of a worldwide organization known for the quality and advanced technology of its needle roller and other anti-friction bearings.

From its small beginnings in 1946, the company has grown rapidly by pioneering scores of new products. INA Needle Roller Bearings have provided designers in many industries, particularly the automotive and machine tool industries, with a solution to their problems.

Over the years, the original range of INA Needle Bearings has been extended to encompass a much wider variety of rolling bearings. These include bearings for both light and heavy duty applications, as well as bearings for rotary and linear motion.

Today, more than 14,000 INA employees throughout the world produce over 10,000 different types of rolling bearings, of which a high number are made to customers' individual requirements. Specifically, our product line includes a large variety of unit cages, shell bearings, needle roller bearings—radical and thrust, cylindrical roller bearing—radical and thrust, combination bearings, precision ground bearings, ball bearings, linear motion bearings and slewing rings.

INA Rolling Bearings are manufactured in 22 plants worldwide. A network of 19 INA companies and 28 agencies provide reliable service and excellent communication with our customers.

All worldwide market research, together with production and application experience, is collated at the parent company in Herzogenaurach near Nuremberg. Thus, a continuous interchange results between the various INA locations and ensures that the latest technology is shared worldwide. This is reflected in the advanced state of the art of all INA products.

In the United States, INA Bearing Company, Inc. was incorporated in September 1969. Today, INA operates three manufacturing plants in South Carolina. Corporate Headquarters were completed in February 1986 just outside Charlotte, North Carolina, in Fort Mill, South Carolina. INA is the second largest needle bearing manufacturer in the United States. □

KHD DEUTZ

The development of KLOECKNER-HUMBOLDT-DEUTZ AG is closely related to the invention of the engine. The organization was founded in 1864 when Nikolaus August Otto (the inventor of the four stroke cycle engine) and Eugen Langen built the world's first engine factory in Deutz, a suburb of Cologne, West Germany.

Today KHD AG employs about 17,000 people worldwide and is the world's largest manufacturer of air-cooled diesel engines. With sales in excess of $2.5 billion annually, KHD AG serves the world markets with its three key product lines:

—diesel engines and gas turbines
—tractors and agricultural machinery
—industrial plants and process machinery

KHD DEUTZ OF AMERICA was founded as a holding company to coordinate and streamline administrative and financial activities of KHD's North American organizations. This occurred after KHD carried out its largest investment outside the Federal Republic of Germany when it purchased major elements of Allis-Chalmers Agricutural Corporation and related finance corporations in 1985.

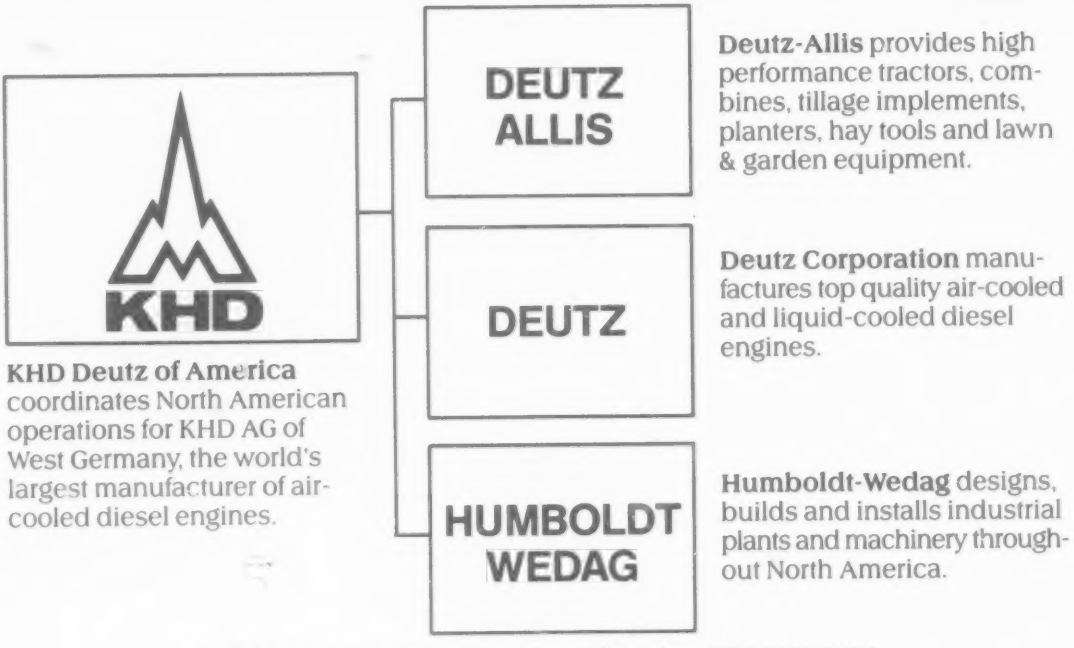
Combining American and German technology and know-how, Deutz-Allis Corporation is today a major element in the North American agricultural market for America and in America.

Over 1,200 dealers distribute tractors from 15 to 220 horsepower; rotary and conventional self-propelled combines manufactured in Independence, Missouri, tillage tools and planters manufactured in Pella, Iowa, and lawn & garden equipment manufactured in Port Washington, Wisconsin.

Deutz Corporation, located in Atlanta, Georgia, enjoys the reputation of a serious and reliable full-service engine manufacturer in the North American market place.

Through OEM's, distributors and a net-

Meet our growing German-American family.



KHD Deutz of America coordinates North American operations for KHD AG of West Germany, the world's largest manufacturer of air-cooled diesel engines.

Deutz-Allis provides high performance tractors, combines, tillage implements, planters, hay tools and lawn & garden equipment.

Deutz Corporation manufactures top quality air-cooled and liquid-cooled diesel engines.

Humboldt-Wedag designs, builds and installs industrial plants and machinery throughout North America.

KHD Deutz of America Corporation, Milwaukee, WI 53201-0933.

work of approximately 500 dealers, the engine division of Deutz Corporation serves the North American market with air-cooled and liquid-cooled diesel engines for usage in construction equipment, compressors, material handling equipment, pumps, generator sets, trenchers, mining equipment and many other applications.

The second leg of Deutz Corporation is the Humboldt-Wedag Division.

Humboldt-Wedag serves the North American market with its industrial plants and process equipment divisions. This involves the design, construction and installation of industrial plants and machinery including coal, ore and mineral dressing plants, etc.

For further information, please write to KHD Deutz of America Corp., Public Relations Department, P.O. Box 933, Milwaukee, WI, 53201-0933. □

KEMPINSKI
HOTELS

In response to rising international demand for Grand Hotels in the great European tradition, a new KEMPINSKI has opened in Dallas—the first in a global expansion program that envisages Kempinski Hotels in major cities throughout the world.

The Grand Hotel Kempinski Dallas (formerly "The Registry Hotel") now caters to a clientele which treasures the classic flair and Old World hospitality of the four great Kempinski Hotels in Germany, -and which welcomes having the charm of bygone days linked with contemporary comforts and amenities.

In keeping with the Kempinski quality heritage, the new Dallas deluxe hotel offers a virtually incomparable range of services in 570 guestrooms and 40 suites, as well as comprehensive conference and leisure facilities.

Long popular with American tourists and business people alike is Munich's Vier Jahreszeiten Hotel. Staying here, right in the heart of King Ludwig II's domain between the Hofbraeuhaus and the Residenz, is an American dream.

In Berlin, Germany's leading cultural center, the prestige address is the Bristol Hotel Kempinski on the Kurfuerstendamm, West Berlin's showpiece boulevard—long the No. 1 choice of show-biz celebrities and political dignitaries from the USA.

Back in the days of the transalantic ocean liners, Hamburg was America's gateway to Germany. Now travelers from the States are rediscovering Hamburg—as the modern-day continental capital of opera and ballet, as well as the gateway to Scandinavia. Hamburg's Atlantic Hotel Kempinski made its debut in 1909 for passengers of the great luxury liners.

The Hotel Gravenbruch Kempinski Frankfurt is the one with the oldest heritage. A one-time manor house, Gravenbruch was first mentioned in official records of 1486—six years before Columbus discovered America. Only minutes from Frankfurt Airport, this historic Kempinski has preserved the casual, relaxed atmosphere of a fine old country estate. U.S. tourists have likewise discovered its merits as a convenient point of departure for European travel, —because some of "Romantic Germany's" top attractions—the Rhine Valley, Old Heidelberg and medieval Rothenburg—are virtually right in the hotel's backyard.

Added convenience: As Lufthansa-affiliated hotels, all Kempinski Hotels can be booked together with the flight at any Lufthansa German Airlines reservation point. Or through Kempinski's New York office at 1640 Hempstead Turnpike, East Meadow, New York 11554 (Tel.: 516-794-2670/2671). Or through "The Leading Hotels of the World".

Welcome to Kempinski. □

Klockner MOELLER

KLOCKNER-MOELLER CORPORATION, a subsidiary of the Klockner-Moeller Elektrizitaets GmbH, located in Bonn, is a recognized worldwide leader in production of low voltage industrial motor controls. Combining over eighty years of experience with state of the art engineering techniques and international field branch service, Klockner-Moeller guarantees their clients total satisfaction.

Klockner-Moeller manufactures a full line of electric and electronic controls for industrial automation such as: Motor Control Centers; custom control panels; Pump control panels; micro, medium and large microprocessor based programmable controllers to handle simple to highly complex machine and factory automation functions; a full line of components including fuseless current-limiting and conventional circuit breakers, interrupters, cam switches, fusible disconnect switches, and manual motor protectors; modularly designed control relays, contactors, overload relays, non-combination and combination full and reduced voltage motor starters; a modern line of push-buttons, pilot devices and limit switches; insulating material and steel industrial enclosures.

Klockner-Moeller's eight factory branches, 5 district offices, representative and distributor network provide access to first rate technical equipment and service.

U.S.A. branch and office locations are; Atlanta, GA, Cleveland, OH, Los Angeles, CA, San Francisco, CA, Chicago, IL, Houston, TX, Fairfield, NJ, Tulsa, OK, Dallas/Fort Worth, TX, Natick, MA, Seattle, WA, Altamonte Springs, FL, Claymont, DE and Corporate Office, Natick, MA. □

Landesgirokasse

While the history of LANDESGIROKASSE dates back to the beginning of the 19th century, its present status is the result of the merger between the former Wuerttembergische Landessparkasse and the Girokasse Stuttgart in 1975. Today Landesgirokasse is equally owned by the Federal State of Baden-Wuerttemberg and the City of Stuttgart. With total assets amounting to DM 18 billion, its activities include the full range of commercial banking services. Covering the highly export intensive area of southwest Germany, particular emphasis is placed on the promotion and assistance of export-related banking and financial services: export finance, foreign payment services, documentary transactions, bonds and guarantees, as well as foreign exchange trading and hedging. A global network of correspondent banks assists us in the execution of tailor-made international banking services for our many corporate clients.

In addition to catering to the banking requirements of our indigenous customers in Baden-Wuerttemberg, we make available special facilities for those international corporations that are already operating or intend to invest in the southwest region of the Federal Republic of Germany.

With the objective to focus even more closely on the necessities of our customers we opened a representative office in New York in the General Motors Building in Fall 1987.

We would be pleased to provide more information:

Landesgirokasse
P.O. Box 386
D-7000 Stuttgart 1
Fed. Rep. Germany
Telephone: (0) 711 2061-ext. 2313 or 2261
In U.S.A.:
Landesgirokasse (L.G. Bank)
767 Fifth Avenue
New York, N.Y. 10153
Telephone: (212) 888-1221 □

Look to Klockner-Moeller worldwide.

Angola • Argentine • Australia • Austria
Belgium • Bangladesh • Brazil • Bulgaria
Canada • Chile • Colombia • Cyprus
Czechoslovakia • Denmark • El Salvador
Finland • France • Gaboon • Germany
(Federal Republic) • Great Britain • Greece
Holland • Hong Kong • Hungary • Iceland
India • Indian Ocean Islands • Indonesia
Iran • Ireland (Republic of) • Israel • Italy
Japan • Jordan • Kenya • Lebanon
Luxembourg • Malaysia • Mexico • Morocco
Mozambique • New Zealand • Norway
Pakistan • Paraguay • Peru • Philippines
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Singapore • South Africa • Spain • Sweden
Switzerland • Surinam • Taiwan • Thailand
Turkey • Uganda • Uruguay • USA • USSR
Venezuela • Yugoslavia • Zaire • Zambia.

With 300 branches in 75 countries, Klockner-Moeller offers one of the broadest lines of equipment in the low-voltage field, ranging from electronic programmable controllers to huge installation of Motor Control Centers and Main Distribution Boards. Acknowledged expertise acquired in over 80 years of experience allows the design and manufacture of complete systems to *actual* customer needs. In industry, commerce, and government.

KLOCKNER-MOELLER CORP.
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Tel: (617) 655-1910
Telex: 94-8434
Telefax: (617) 655-2763

KLOCKNER-MOELLER GmbH
Postfach 1880
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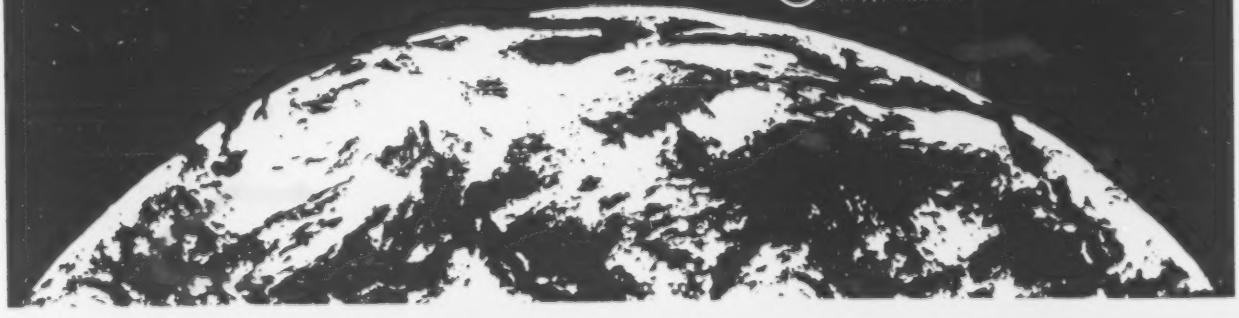
5300 Bonn 1
Federal Republic of Germany
Tel: (49228) 602-1
Telex: (841) 866877"
(841) 866503"



Leitner

LEITNER designs and manufactures display systems for exhibitions, merchandising and interior decorating applications with true architectural principles to guide the design stages. These principles are reflected in the function of all Leitner Exhibit Systems.

This outstanding dedication to principle produces a simple design concept with emphasis on the essential element. From the most extensive structure to the most discrete filigree shelving incorporates this philosophy.

Leitner Exhibit Systems are capable of fading into the background or forming a dynamic focus by themselves.

The bottom line is a perfectly tailored, flexible solution that is aesthetic, functional and effective in communicating the image suited to your company identity.

Leitner in the U.S.A. is located in Chicago, IL and universally in over 15 countries.

Leitner USA, Inc.
Exhibit Systems
233 East Ontario Street
Suite 1101
Chicago, IL 60611

Leitner GmbH
Exhibit Systems
Duesseldorfer Strasser 14
D-7050 Waiblingen

LEYBOLD

LEYBOLD AG has been successfully meeting, for many years, the exacting technological challenges of the North American market. Vacuum technology and its process appplications today are base technologies indispensable for research, development and production in all fully industrialized countries. Neither microchips nor modern data storage media nor high-grade materials for space travel would have been possible without vacuum processes.

Along with the worldwide penetration of vacuum technology and process engineering, the commitments of Leybold have expanded all over the world. Originating from the two companies W.C. Heraeus, Hanau, and E. Leybold, Cologne, founded in 1850 and 1851 respectively, Leybold today is owned by Degussa AG in Frankfurt/Main, Federal Republic of Germany. Sales have been increasing over the last ten years at an average annual rate of 11%, more than DM 1.1 billion, of which, recently, about 25% has been in the US-market.

A few examples may illustrate the wide range and depth of involvement of applied vacuum technologies:

—Materials for microelectronics components and their functional film

—Magnetic layers for data storage media

—Optical thin films for spectacle lenses, photolenses and space telescopes

—Infrared or ultraviolet analysis of gases up to systems for displaying traces on transparent materials (dactyloscopy)

—Ultracleaning of reactive and refractory metals, such as titanium, zirconium and their alloys

—Deposition of anticorrosive protective layers on components exposed to high thermal stress

—Vacuum generation systems for preservation of foods up to gas supply systems for carbon dioxide lasers

The activities of Leybold corporate group, today including 20 subsidiaries, span the globe. The U.S.A. occupies an exceptional position as a market of undeniably greatest technological importance in the world. Here the growth rate for Leybold products is higher than the world average. Today already 50% of LH products sold in the U.S.A. are produced

Nobody in the world makes more kinds of bearings than

FAG

Since 1883

Hamilton Avenue
Stamford, Connecticut 06904

inside the country.

By the end of 1984, a new Leybold sales and service organization for the U.S.A., Leybold Inc., 1860 Hartog Drive, San Jose, CA 95131, started operations from its California headquarters. The activities of Leybold Inc. include marketing of the products of the four Leybold U.S. subsidiaries:

Leybold Vacuum Products Inc., 5700 Mellon Road, Export, PA 15632: Vacuum pumps, pumping systems, vacuum accessories and surface analysis equipment.

Leybold Inficon Inc., 6500 Fly Road, East Syracuse, N.Y. 13057: Residual gas analyzers, pressure converters, mass spectrometer systems, helium leak detectors, vacuum gauges, vacuum deposition and thin film controllers.

Leybold Technologies Inc., 120 Post Road, Enfield, CT 06082: Crystal growers and productions sputtering systems, vacuum metallurgy, electro-optical coating systems.

Leybold Vacuum Systems Inc., 120 Post Road, Enfield, CT 06082: EB welding systems and technology.

In view of the importance alone of the semiconductor industry, we have set up a Leybold branch establishment on the West Coast in San Jose, CA. □

Lufthansa

Twelve new destinations were added to LUFTHANSA's route network in 1987. Leading the list was Washington, D.C. bringing to 18 the number of destinations Lufthansa serves in North America. Service to the U.S. capital achieved load factors in the 70's in the initial months and will begin operating daily in May 1988. Worldwide, Lufthansa now offers service to 161 cities in 82 countries. New vacation destinations as of October 1987 are Luxor, Egypt and Katmandu, Nepal.

In the first nine months of 1987, the airline had more than an 11 percent increase in passenger traffic, while freight gained close to 14 percent. Revenue passenger kilometers showed close to a 20% increase over 1986. Worldwide, the airline's seat load factor was up 7.4 points to 66.3%, and on the North Atlantic it was up 11.2 points to 73.2%. Summer North Atlantic traffic for Lufthansa was excellent with all U.S. gateways showing large increases ranging from 30% to 70%.

Lufthansa has ordered ten of the new Boeing 747-400 aircraft. The first six of the aircraft will begin flying in 1989. Leading a group of European airlines, Lufthansa had a major say in the configuration of the 747-400. General Electric CF6-80C2 engines will power the new jetliners.

Lufthansa, which moved into first place in international freight traffic in 1986, has also ordered another Boeing 747 freighter. It will be the fifth jumbo freighter in the airline's fleet in July 1988.

In the Airbus family of aircraft, Lufthansa has ordered 15 of the new, four-engine A340 for delivery beginning in 1992. This year, Lufthansa will also begin taking delivery of the 300 extended-range model of the Airbus A310. The company's contract calls for 25 A310s and 15 of the new, advanced-technology A320s. The A320 will begin succeeding the Boeing 727 in the airline's fleet in 1989.

In the summer of 1987, Lufthansa established a new charter airline, with headquarters in Palma de Majorca, which will begin operations in the Spanish charter market in the 1988 summer season. The new charter subsidiary, in which Lufthansa will hold 48 percent and Spanish partners the rest, will give Lufthansa the opportunity to gain access to European charter markets which cannot be served by Condor. The airline has leased 3 Boeing 737-300 aircraft for the new operation which will supplement and complement Condor routes.

Lufthansa also purchased a ten percent share of Hapag-Lloyd AG, the shipping and travel group.

Lufthansa reported a corporate net income of DM 64.4 million in 1986 despite an operating deficit of DM 66.6 million. Executive Board Chairman Heinz Ruhnau was cautious about forecasting the 1987 net result, but said he was convinced the airline would once again show a profit. The fall of the dollar has reduced the company revenues by more than ten percent compared to 1986.

For 1986, Lufthansa reported a balance sheet profit of DM 63 million which represented once again a dividend of seven percent on both common and preferred shares. At the same time, stockholders approved the company's plan to increase its basic capital by 300 million marks to DM 1.2 billion.

The 1986 annual report shows total capacity offered rose by 11.2 percent to 8.66 billion ton kilometers. Sold capacity increased by 12.7 percent to 5.57 billion ton kilometers. The airline transported 16,618,100 passengers and 709,571 metric tons of freight. Freight traffic was strong, showing a 17.1 percent increase to 2.86 billion ton kilometers which allowed Lufthansa to move into first place in international freight traffic.

Revenue passenger kilometers rose 8.5 percent to 2.58 billion. Lufthansa experienced the largest growth in demand on the North Atlantic followed by the Far East/Australia and the South Atlantic. Results on the North Atlantic were clearly affected by the weak dollar and the reluctance of U.S. tourists to travel to Europe. Despite this, Lufthansa's passenger volume on the route rose by 14.4 percent, while North American airlines experienced a drop of 10.9 percent. Lufthansa was helped by a 30% increase in westbound travel.

Eighty percent of Lufthansa's capital investments in 1986 of DM 1.56 billion went into the airline's fleet. Fifteen new aircraft were purchased. □

LURGI

LURGI GmbH is a company specializing in process technology, design engineering and contracting, operating throughout the world. Its main fields of activity are upgrading of raw materials, energy technology, and environmental protection.

Lurgi undertakes the design, supply, construction and erection of complete turnkey plants, plant units and equipment for all sectors of industry, including infrastructure.

The organization and engineering practices of Lurgi GmbH enable each project to be realized on a flexible and individual basis. Lurgi is not dependent on company-owned manufacture of plant and equipment and is therefore free to select the most suitable suppliers in terms of quality, reliability and financing, including those in the customer's country or in third countries.

Lurgi carries out consulting, engineering and management activities within the scope of project execution and also offers them as a separate service.

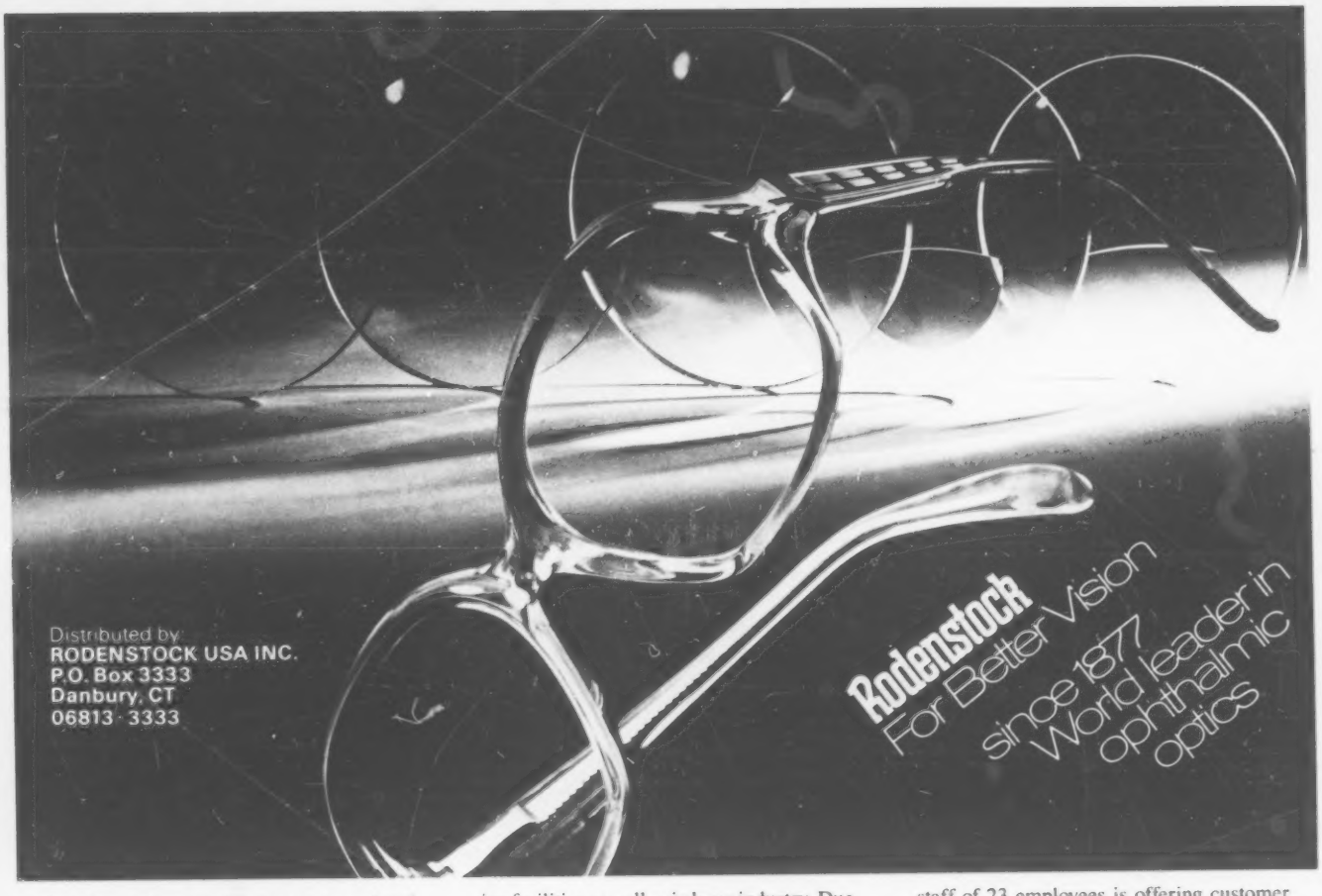
Perhaps more than any other plant engineering and contracting company, Lurgi is a synonym for technical know-how and its translation into industrial reality.

Benefication and further processing or upgrading of raw materials, energy generation (coupled with pollution control in its broadest sense) and general industrial plant contracting form the foundation of Lurgi's programme of about 500 processes including process variants.

Lurgi GmbH has three Operating Divisions with nine Process Divisions. Four Functional Divisions provide interdivisional services. The staff numbers over 4,000.

Throughout the Lurgi companies abroad, its representative offices and agencies in all important countries, Lurgi has a global infrastructure system at its disposal to cope with the special features of foreign markets.

An experienced project management team is available for every task. Lurgi organizes the



financing of industrial projects on a national or multinational basis. In cooperation with the trading group of Metallgesellschaft AG, Lurgi also helps its customers with the marketing of their products and develops overall plant concepts, taking in everything from the design and building of plants to the selling of the products. □

MAHO

THE MAHO CORPORATION, Pfronten, is ranked among the leading machinetool manufacturers in the world. The organization is developing, manufacturing and marketing CNC controlled Universal Milling & Boring Machines and Machining Centers. The MAHO product range is offering a modular programming system (CIM) and software providing completely integrated automated production for flexible manufacturing systems. Customer training, maintenance and a worldwide service network are also outstanding features of the MAHO program.

MAHO Universal Milling & Boring machines find application in the tool & die and mold industry, in single and small batch manufacture, in technical schools and training facilities as well as in large industry. Due to the availability of various sized machines and the increasing automation level up to flexible Manufacturing Systems, the MAHO machines are able to cover a wide spectrum of applications.

The MAHO organization, with a staff of approximately 2,100 worldwide and a total sales volume of approximately DM 400 million, exports almost half of its total production. The organization consists of the MAHO Corporation and five sales and service subsidiaries in the USA, Great Britain, France, Italy and Singapore and, in addition, a manufacturing facility in Vils, Austria. Very recently MAHO became a major stockholder in the Italian company Graziano S.p.A., Tortona. The Graziano company is very well known in the United States, having sold several thousand conventional lathes to U.S. companies. MAHO intends to build on this fact and re-enter the U.S. market with modern CNC lathes.

The MAHO subsidiary in the United States, the MAHO Machine Tool Corporation, was founded in 1980. From its headquarters located in Naugatuck, CT, the company operates through a nationwide, highly qualified distributor network covering the markets in the U.S.A., Canada and Mexico. In addition, the MAHO facility in Naugatuck with a staff of 23 employees is offering customer training, technical consultation and complete customer service.

For the fiscal year 1986/87 the MAHO Machine Tool Corporation achieved a total sales of more than $15 million. This represents an increase of approximately 15% over the preceeding year. The fiscal year 1986/87 proved that even under extremely difficult economical conditions the concept of high precision Universal Milling and Boring machines is gaining more and more recognition in the United States.

The MAHO Corporation proudly looks back on many years of tradition as a machinetool manufacturer. Founded in the year 1920 by five tool and die makers from Pfronten, the organization initially concentrated on the production of mathematical precision instruments. The year 1950 marked the beginning for MAHO as a machinetool manufacturer. From this Pfronten area, known for its precision mechanical work, located at the foothills of the Bavarian Alps near the Austrian border and very close to the world famous 'King castles', the MAHO organization was able to branch out and achieve considerable worldwide success in the following years.

In the year 1980, the MAHO product range consisted 100% of CNC Milling and Boring

machines and computer controlled Machining Centers. Due to this early development from classical machinetool builder to manufacturer of computer-aided, flexible manufacturing systems, the MAHO organization expanded into a completely new dimension.

In the year 1986, the MAHO Werkzeugmeschinenbau Babel & Co., privately owned until that time, went public. Since December 1986 MAHO shares have been traded on the stock exchanges in Frankfurt, Munich and Stuttgart. Approximately 25% of MAHO shares have been sold publicly; however, the majority of the shares are still held by the founder families. □

MAN GHH CORPORATION is the US subsidiary of MAN GUTEHOFFNUNGSHUETTE GMBH, Oberhausen, Federal Republic of Germany, and represents the interests of several companies of the MAN group in the US.

- *Industrial Plant Engineering*

Plant Design and Equipment Engineering for the Iron and Steel Industry and Non-Ferrous Metal Production; Coal Preparation Plants; Hazardous-Waste Incineration Plants, Heat-Recovery Systems, Coal Gasification; Special Steel Structures.

- *Transportation Technology*

Vertical and Horizontal Haulage Systems for Underground Mines; Open Pit Mining Equipment; Material Handling Equipment for Containers, General Cargo and Bulk Material; In-Plant Mechanical Handling Facilities; Cranes.

Special Rubber Tire Vehicles for Mine and Industrial Transportation Systems.

Wheel Sets for Railroad Applications.

- *Compressors and Turbomachinery*

Turbocompressors, up to the highest capacities, for the process and petrochemical industry, for steel plants and other applications. Process Gas Expanders; Gas Compressor Stations; Screw Type Compressors for air and for process gases.

- *Energy Technology*

Fossil Fired Thermal Plants for Base Load and Cycling Duties; Stream Turbine Generators, 100 to 900 MW; Cogeneration; Systems for Environmental Protection.

Components for Nuclear Power Stations, In-Service Inspection Service.

- *Industrial Services*

Total Project Contracting for Plants, Buildings, Steel Structures, Erections; Maintenance Service for Refineries and Petrochemical Plants.

Floating Dry Docks and other Marine Structures.

MAN B&W DIESEL is the world's largest supplier of Diesel Engines, with its principal offices in Augsburg (Germany) and Copenhagen (Denmark) and Licensees the world over.

MAN B&W DIESEL Supplies Ship-Propulsion Systems, with Slow Speed Engines (up to 65,000 HP) or Medium Speed Plants (up to 20,000 HP) plus Auxiliary Engines and Gen Sets; Complete Propulsion Systems with C/P Propellers. For Stationary Applications and Power Plants, MAN B&W DIESEL offers a full power range, for heavy fuel, dual fuel, and gas applications; Total Plant Engineering, incl. Cogeneration.

A network of After-Sales Service Stations is available world-wide.

MAN Technologie GmbH is the center of the MAN group's research and development activities. Projects encompass the fields of energy, space technology, transportation and environmental protection.

MAN GHH CORPORATION is headquartered at 50 Broadway, New York, NY 10004 (Tel. (212) 509-4545), with a branch office in Pittsburgh, PA 15237 (Pittsburgh Office & Research Park, 5700 Corporate Drive, Suite 430, Tel. (412) 364-3700) □

Precision
made in Germany

teams up
with advanced
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Result:
The pace-setter
in fabricating –

TRUMATIC series.

TRUMPF

TRUMPF
Maschinenfabrik
Stuttgart
Federal Republic
of Germany

TRUMPF America Inc.
Farmington/Connecticut
U.S.A.

mtu

The MTU GROUP comprises MTU Motoren- und Turbinen-Union Friedrichshafen GmbH, MTU Motoren- und Turbinen-Union Muenchen GmbH and their subsidiary companies.

MTU Muenchen, wholly owned by Daimler-Benz AG, holds approximately 84% of the share capital of MTU Friedrichshafen with the balance being held primarily by the Maybach and von Brandenstein-Zeppelin families.

In fiscal 1986 the consolidated Group turnover was increased by 7.8% from DM 2.74 billion in fiscal 1985 to DM 2.95 billion. Direct and indirect exports accounted for approximately 58% of this figure. The current combined workforce of all MTU companies is around 17,540.

MTU Muenchen GmbH, with a turnover of DM 1.26 billion in 1986, develops, manufactures and markets aircraft engines and has, for many years, successfully cooperated with European and American aircraft engine manufacturers. Engines for military applications continue to influence both turnover and work load. However, in accordance with the aim of the Board of Management to expand the company's activities on the civilian market, a considerable proportion of the production capacity in Munich is already devoted to the manufacture of engine components for commercial aircraft. MTU components are to be found in almost all modern, Western World civilian aircraft, e.g. Boeing 747, 757 and 767; Airbus A 300, A 310 and A 320; the MD-80 series of aircraft from McDonnel Douglas. In 1986 the civilian sector accounted for 3% of turnover, by the end of this decade this will be increased to over 50%.

MTU Friedrichshafen develops, manufactures and markets diesel drive systems, as well as diesel engines in combination with gas turbines, gearboxes, couplings, alternators and electronic monitoring and control systems for marine, rail, vehicular and electric power generation applications. The diesel engine Sales Program covers the 30 to 7,400 kW power range.

MTU diesel engines reflect the results of many years of experience and are in service all over the world.

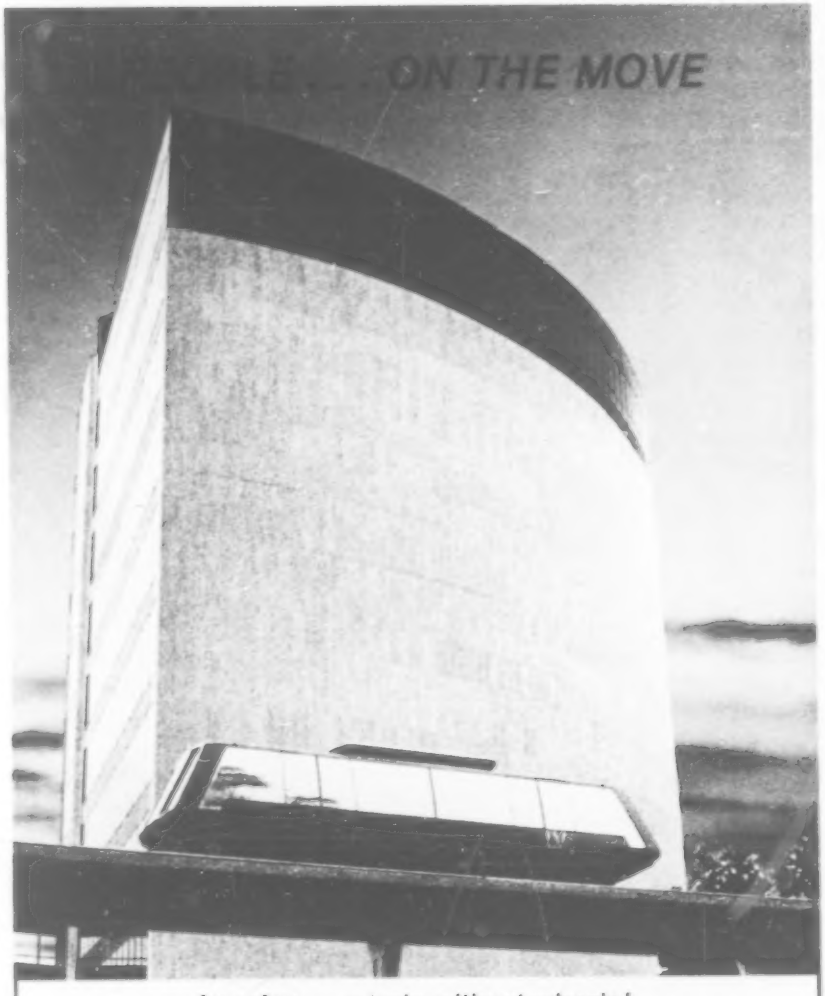
In 1986 MTU Friedrichshafen achieved a turnover of DM 1.25 billion with a workforce of 6,200.

Direct and indirect exports accounted for 59.5% of turnover, of which, sales to Asian countries exceeded those to the Common Market countries and the rest of Europe.

Once again marine applications (55%) represented a major element of fiscal 1986 turnover; heavy vehicle and rail applications accounted for 31% and 6% respectively, whereas electric power generation applications achieved an 8% share.

MTU Friedrichshafen has subsidiary companies in Brazil, Argentina, Singapore, Austrlia and Houston/Texas, whose main responsibilities include the marketing, assembly and maintenance of MTU engines. The U.S. subsidiary has achieved considerable success in the American market with propulsion systems for yachts. □

MAGNETIC TRANSIT OF AMERICA, INC. (MTA) is an innovative leader in public transit. Using cutting-edge technology, the company has quickly established itself as an aggressive new force in a slowly changing industry. MTA was founded in 1984 and maintains its headquarters in Los Angeles, California.



Imagine... a train without wheels!
Envision... a magnetically levitated ride,

Smooth, Quiet and Comfortable.

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an **AEG** company MTA 1987

MTA has an exclusive license for the German-engineered M-Bahn Magnetic Transit System in the United States, Canada and Taiwan. MTA's objective is to design, build, and operate Mass Rapid Transit systems for public or private use. The licensor, MAGNETBAHN GmbH, located in Starnberg, West Germany maintains the marketing rights for Europe and the remainder of the world market. The majority interest in both MTA and MAGNETBAHN GmbH is owned by AEG AG, Germany's second largest electro concern.

The M-Bahn Magnetic Transit System is a magnetically levitated, electromagnetically propelled Mass Rapid Transit system. The system is unique in that it uses permanent magnets for levitation which require no energy. This not only keeps the train from settling during a power loss, but it also permits extremely energy-efficient operation.

The system is propelled by a linear synchronous motor (LSM). The LSM consists of the permanent magnets mounted on the vehicle undercarriage and a travelling, electromagnetic field inside the guideway. An air gap between the vehicle and the guideway is maintained in order to keep the vehicle from coming into direct contact with the guideway at any time. The elimination of friction and of virtually all moving parts makes operation and maintenance of the M-Bahn system simple and very cost-effective.

After ten years of extensive testing the M-Bahn is ready for public use. The world's first commercially operated M-Bahn system is soon to open in Berlin, West Germany. In the United States, MTA has a contract to build a 1.3 mile People Mover in Las Vegas, Nevada.

The revolutionary M-Bahn Magnetic Transit System is different from anything currently available on the transit market. Aside from the smooth, quiet ride and other benefits to the passengers, the system is an economic investment for the community and the taxpayers. Whether publicly or privately financed, the M-Bahn is a modern transit system that offers efficient and convenient service at low cost.

Melitta®

The MELITTA Group, as we know it today, owes its origins to the inspired invention of a housewife in the city of Dresden, Germany. In 1908, Frau Melitta Bentz was granted a patent for a new method of brewing fresh coffee using paper filters. Frau Bentz and her husband, Hugo, set up a small family business to manufacture the original "Melitta" filter papers. The business expanded rapidly, particularly after the First World War. 1925 saw the appearance of the first pack with the red and green colors that have remained the unmistakable hallmark of Melitta. In the following years, the design of the Melitta filter was progressively improved and refined. The Melitta coffee filter, as we know it today, was developed and patened in 1936.

Melitta's business activities in North America are concentrated on products for the discerning coffee drinker. The range of products marketed under the "Coffee Perfection" slogan enjoy a high reputation for quality among North American consumers. The consumer product line includes a full range of household coffeemakers, automatic drip and non-electric, coffee filters, extra-premium coffees and accessories.

Marketing a complete range of coffee-related products, Melitta projects a strong claim to expertise in the field of coffee and coffeemaking. Sales and marketing activities are carried out with the aim of reinforcing this claim.

Melitta has recently launched the Melitta Foodservice Division to provide a full range of coffeemakers, coffee filters and premium coffees for institutional, restaurant and office service needs.

Melitta coffee for all of North America, foodservice and retail, is roasted and packaged at the company's headquarters in Cherry Hill, New Jersey. Filter production is concentrated at the company's Toronto location.

Melitta's Region North America companies are subsidiaries of Melitta International, based in Minden, West Germany. Worldwide, the company manufactures and markets a wide variety of consumer products in 104 countries.

DAIMLER-BENZ, the world's oldest automaker and West Germany's largest industrial company, will celebrate the centennial of its doing business in the United States in 1988.

Gottlieb Daimler, who developed the first compact, high-speed engine, and William Steinway, the American piano manufacturer, signed a licensing agreement to produce Daimler products in the United States on October 6, 1888. Their agreement, concluded eight years before Henry Ford's Quadricycle was born, included a license to build engines, light trucks and passenger cars. This act essentially founded the automobile industry in the Americas.

The Steinway organization initially contracted with a machine shop in Hartford, Conn., to build gasoline engines. At first the emphasis was on producing marine engines. However, the company assembled Mercedes automobiles in Long Island City, N.Y., from 1905 to 1907.

From these beginnings the Stuttgart-based firm has broadened its American horizons to include three major subsidiaries:

—Mercedes-Benz of North America, distributor of Mercedes-Benz cars and industrial engines, with headquarters in Montvale, N.J.

—Freightliner Corporation, manufacturer and marketer of heavy-duty (Freightliner) and medium-duty (Mercedes-Benz) trucks, with headquarters in Portland, Ore.

—Mercedes-Benz Credit Corporation, with headquarters in Norwalk, Conn., serving Mercedes-Benz and Freightliner dealers with a wide array of financial services.

In addition, recently acquired Daimler-Benz subsidiaries AEG, Dornier and MTU have sales activities in the United States.

MBNA's 432 sales and service dealers sell about one-sixth of the Daimler-Benz annual production of passenger cars, making it the parent company's largest sales subsidiary.

MBNA dealers sold approximately 90,000 cars in 1987, and expect to sell about the same number in 1988. A full range of Mercedes models is offered in the United States, from the 190 sport sedans to the limited-edition 560SEC coupe. The range offers U.S. customers a wide choice of body sizes and engine combinations. Over the years, the three-pointed star has enjoyed increased popularity, and there are now more than one million Mercedes-Benz cars registered in the United States.

MBNA employs more than 1,700 persons, and Mercedes-Benz dealers have an additional 17,000 employees. The company has seven zone offices—in Montvale, Baltimore, Jacksonville, Houston, Chicago, Los Angeles and San Francisco—to provide the dealer organization with sales and service support.

In addition, MBNA operates five training centers, in Montvale, Jacksonville, Chicago, San Francisco and a new facility in Oxnard, Calif., to keep dealership technicians up to date on the various technical advances in the company's product line.

MBNA also has six parts distribution centers located near centers of ownership and transportation hubs. They are in Somerset, N.J.; Baltimore, Md.; Jacksonville, Fla.; Ft. Worth, Tex.; Carol Stream, Ill., and La Mirada, Calif.

Mercedes-Benz passenger cars are shipped from Germany to the ports of Baltimore, Jacksonville, Houston, Los Angeles and San Francisco, where each is inspected at a vehicle preparation center.

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"Melitta Makes It All So Easy Because Melitta Makes It All"™
• Automatic Coffeemakers • Extra Premium Coffee •
• Gourmet Coffeemakers • Filter Paper •
For Retail and Foodservice Markets
Melitta Region North America Melitta Foodservice Corp.
Melitta USA Inc.
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To make sure cars continue to meet federal and state emission standards, the company also operates emission laboratories in Ann Arbor, Mich., Denver and Los Angeles, as part of its research and testing operations.

In addition, Mercedes-Benz industrial engines are sold to manufacturers of electric generators, boats, agricultural equipment, earth movers and other applications requiring mobile power units.

MBNA, Freightliner, Mercedes-Benz Credit and Mercedes-Benz Canada, are part of the Daimler-Benz of North America Holding Company. In 1987 these firms employed more than 7,500 persons, about 2.4 percent of the approximately 320,000 persons employed by Daimler-Benz in the 170 countries in which the company conducts its business. □

The METALLGESELLSCHAFT AG was incorporated in 1881 as a joint-stock company to carry on a longstanding Frankfurt metal trading business. In the course of the over a century which has passed since then, Metallgesellschaft continuously expanded its activities by establishing a new or acquiring existing plants and by merger with or participation in other companies. Today, the group of companies thus formed presents itself as a widespread organization in the fields of basic materials and capital goods as well as engineering and contracting.

Metallgesellschaft is one of the most important enterprises of West German industry; with a worldwide turnover of almost DM 15 billion it ranks among the largest corporations of the Federal Republic of Germany. The MG Group with almost 25,500 employees worldwide engages in the exploitation and beneficiation of ores and industrial minerals for supply to its own smelters or chemical plants. Part of the metals produced as well as metals from other sources are processed into semi-finished and finished products in works of the Group. Together with the metal processing goes the manufacture of plastic goods by similar technologies. Metallic components of ores and their sulphur content form a basis for the production of chemicals, especially sulphuric acid, sulphur dioxide, white pigments, filters, barium, caesium, lithium and sodium compounds.

The trade in raw materials which was originally restricted to metals and ores, now also extends to other commodities: Sulphur, phosphates, fluorspar, methanol, alumina, rubber, iron ore, manganese ore, molybdenum, ferro-alloys, coal, crude oil and mineral oil products.

MG Services Company, New York, specialists in counter trade and barter, serve a wide variety of corporate and government clients.

The tasks connected with production, distribution and trading made it advisable to provide integrated transport and insurance services. The financial transactions of MG performed on an international scale are entrusted to its own bank.

The technological know-how, especially in the fields of ore preparation and smelting, chemical production, petroleum processing, upgrading of solid fuel, and environmental controls is offered on a world-wide basis by Lurgi GmbH., the Group's engineering company. This extensive diversification is reflected by the grouping into 15 different Operating Divisions, which are largely independent and responsible for current business. These Operating Divisions are grouped in 5 Corporate Divisions. □

NIXDORF COMPUTER

NIXDORF COMPUTER develops, manufactures, markets and supports computer systems and peripherals for data and information processing. The company is one of the leading suppliers of business oriented solutions in the international computer industry.

The Company's sales and service network covers 44 countries with emphasis on Western Europe and the USA. Nixdorf is also active in Australia, New Zealand, Japan, Hong Kong, Korea, Singapore, Sri Lanka, the Philippine Islands, Latin America and Africa.

Computer and peripheral systems are produced by Nixdorf on an international job sharing basis, where many of the plants provide individual components for use in further production. Factories in Germany are located in Paderborn, Berlin and Cologne. Outside Germany, production plants have been established in Ireland (Bray/Dublin), Spain (Toledo), America (North Reading, Mass.) and Singapore.

Nixdorf development activities are also based on international cooperation. Nixdorf's American development sector has been carefully built up in order to ensure direct access to the most significant technology market internationally.

Users of Nixdorf systems include both medium and large sized companies in the retail, banking, manufacturing, distribution, service and public administration industries. These customers are supported by a sales and service organization largely run by Nixdorf itself. In Germany and in some other countries, this network is supplemented by agents for the company.

Nixdorf employs approximately 27,500 personnel (30th June 1987). Most of the staff are involved in service functions such as consulting, administration, technical service and trading. These services are available to the user in all phases of computer implementation, offering well-informed market-oriented support.

The workstation-oriented design of the computer systems and the capacity for branch-related specialization in the sales and service organization are decisive factors in the Nixdorf solutions concept. And the success of this concept is reflected in the steadily increasing market shares in Germany and worldwide. □

NORTH AMERICAN LIFE AND CASUALTY COMPANY (NALAC) is a member of the Allianz of America family of companies, a growing German-owned insurance group in the United States.

Established in 1896, NALAC was purchased by Allianz (the seventh largest insurance group in the world) in 1979. NALAC's life insurance in force has grown to over $30 billion. The company is licensed in all 50 states, including New York State through its subsidiary Preferred Life Insurance Company, plus all provinces of Canada. NALAC ranks among the top 5% of all life insurance companies doing business in the United States today.

Best's Insurance Reports, accepted by the life insurance industry for its fair and comprehensive reports on insurance company operations, has assigned NALAC an "A+" (Superior) rating. This top rating reflects Best's opinion of the relative strength of NALAC compared with other companies within the life and health insurance industry based on vital areas such as underwriting, expense control, investments and capital sufficiency.

NALAC offers a wide range of life, accident and health coverages through both individual and group plans.

Based on its specific strength in the business insurance market and as a member of a worldwide operating insurance group, NALAC is committed to serving the German American business community. As coordinator of the Group Insurance program sponsored by the German American Chamber of Commerce, NALAC is a central partner in this service package which includes major medical, term life, dental and disability insurance coverage for small- to medium-sized companies. NALAC is especially responsive to German American businesses—large or small—so that these companies can benefit from NALAC's knowledge, understanding and financial strength. □

OLYMPIA

OLYMPIA began its distribution of Olympia precision engineered office equipment in the United States in the 1950's. The company's success in the American market is the result of careful market analysis and planning, and systematic program implementation.

Because the United States has long been viewed as one of the world's most important business machine markets, Olympia USA was organized as one of Olympia's most comprehensive sales and service networks.

Today, Olympia USA is comprised of headquarters in Somerville, NJ, and regional sales offices and service centers in New York, Chicago, Los Angeles, San Francisco and Atlanta; and a network of more than 1300 office machine dealers—the most highly respected dealer organization in the office equipment industry.

Each Olympia dealer is established—through extensive corporate training and continuing marketing and service support from Olympia USA—as an office equipment specialist with the expertise needed to supply local customers with equipment solutions that best meet their current and future office automation needs.

In the United States—as in the rest of the world—customers from virtually every sector of the economy have come to depend on Olympia to provide them with high quality business machines that meet the increasingly complex demands of their business communications and operations. □

KPMG Peat Marwick

European companies are traditionally international in their operations and need a professional services organization that can deliver integrated accounting and auditing, tax, and management consulting services on the same scale throughout the world. At the same time, they require a professional services organization that knows the local customs, culture, laws, and accounting standards to ease the way into previously untested markets. PEAT MARWICK MAIN & CO. is that kind of firm. We gear our full service resources to offering the best of both worlds—global reach and local adaptability—all over the world.

Peat Marwick is a member firm of Klynveld Peat Marwick Goerdeler (KPMG) the world's largest professional services organization, with operations in over 100 countries. It was formed with the merger of Peat Marwick International and Klynveld Main Goerdeler. Our audit, tax, and consulting professionals in the United States can service your cross-border needs through access to a geographically balanced network of more than 5,000 partners and over 50,000 professional and administrative staff who possess

intimate understanding of their local markets. In Germany, Peat Marwick Treuhand GmbH and Deutsche Treuhand-Gesellschaft AG together have over 2,000 professionals and support staff on hand to respond to your needs.

Moreover, our multidisciplinary team of German-speaking professionals in New York, Chicago, and other key locations can immediately apply their skills to your organization's presence in the U.S. market—no matter whether yours is a large well-established operation, a recent or pending acquisition, or a start-up facility.

For more information on how Peat Marwick can fulfill your professional services needs, contact management consulting partner H. Juergen Tschesnok at 345 Park Avenue, New York, NY 10154, 212-872-5704. Mr. Tschesnok stands ready to put you in touch with the right industry and functional specialists. □

PORSCHE

The 1988 PORSCHE family of cars is a synthesis of performance, practicality and value that makes the marque one of the best long-term automotive investments in the world.

The Porsche story is one of built-in value—value at purchase through designed form, function and performance, value for years of quality driving time and reliability, and value at resale. From the 924S to the premier high performance 928S 4, the 1988 family of four-, six- and eight-cylinder Porsches is the latest evolution in a line of cars that traditionally has held some of the highest resale values in the industry.

In a comparison of the nine regional editions of the July 1987 NADA Official Used Car Guide, a 1984 four-year-old model 944 has an average retail price that is over 78 percent of the original purchase price. And a used 1986 model 944 is worth 100 percent of the original purchase price. These prices are based on average resale prices listed in nine regional editions of the July 1987 NADA Official Used Car Guide.

Value isn't something that just happens or gets tacked on as an afterthought. Value is designed in from the first engineering concept. Porche was the first automobile manufacturer us use galvanized steel in the body construction of its models. The elegant body styles are a product of extensive aerodynamic testing. The final design is in a car that looks good because it so clearly meets the demands of high performance driving.

Porsches are designed to have top performance and fuel efficiency. A good example of performance and economy is the Porsche 911 Turbo, one of the most powerful sports cars in the world despite its relatively small displacement 3.3-liter engine. The Porsche 911 Turbo can zip from 0 to 60 mph in under six seconds and still get more than an EPA-rated 22 miles per gallon in highway driving.

Every Porsche also comes with a history of durability built into the design. In 1973 Porsche introduced an experimental concept car called simply the "Langzeit-Auto"—the long-life car. One of the features of the long-life car which has since gone into every Porsche is the 26-step finishing and painting process each Porsche undergoes. It allowed Porsche to institutue its 10-year limited rust perforation warranty.

Finally, after the best engineering and one of the industry's top production systems turn out each Porsche automobile, the cars are delivered to one of two Pre-Delivery Inspections (PDI) facilities in the United States. Each car is fully inspected and prepared for delivery, further insuring that the car that is driven off the showroom floor at the hundreds of Porsche dealers around the country meets every performance and appearance standard set by Porsche engineers and designers. □

NORTH AMERICAN LIFE AND CASUALTY COMPANY

Allianz

We're responsive.

We meet specific needs of German American businesses — large or small — with unique insight and understanding of the problems and opportunities facing international firms.

As coordinators of the GERMAN AMERICAN CHAMBER OF COMMERCE sponsored Group Insurance Program we've learned to listen to your problems, and we speak your language.

NALAC is a German American firm and a member of the growing group of ALLIANZ OF AMERICA companies. Headquartered in Munich, the ALLIANZ group is one of the largest families of insurance firms in the world. Through NALAC, and in conjunction with ALLIANZ, German American businesses can benefit from knowledge, understanding and solid financial strength.

For more information, contact:

Edward J. Bonach, International Markets Department, North American Life and Casualty Company, 1750 Hennepin Avenue, Minneapolis, Minnesota 55403. 1-612-347-6509 or 1-800-328-5600

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Company _____ Address (Street) _____

Telephone _____ No. of Employees _____ Address (City, State, Zip) _____

PREUSSAG

PREUSSAG was founded in Berlin in 1923. The Company, originally purely mining and smelting oriented, is today engaged in mining, smelting and trading of metals, plus transportation, energy and construction.

The Preussag Group ranks, with a share capital of DM 402 Mil. and approximately 27,402 employees, among the top 50 industrial enterprises in West Germany. The sales of Preussag Group in 1986 totalled DM 8.1 billion.

The Metal Division's business includes prospecting, exploring, mining, smelting and processing of non-ferrous and pure metals with a total smelting capacity of more than 175,000 mt of zinc and 160,000 mt of lead.

The London-based Amalgamated Metal Corporation PLC (AMC) is engaged in a range of activities on five continents. It is structured into three areas of operations: industrial, trading and tin smelting.

A leasing fleet of about 22,400 rail tank cars, 58 inland waterway ships and various inland and seaport tank farms form part of the services of the Transport Division. Furthermore 81 OSA supply ships are providing worldwide services for offshore drilling and production activities.

Natural exhaustion of domestic oil and gas production deposits led Preussag to international exploration activities, partly concentrated in the United States, by participating through affiliated companies and subsidiaries in oil and gas producing properties, i.e. offshore Louisiana.

The main activities of the Construction Division in Germany and abroad are excavation, pipeline and waterworks construction as well as complete fire protection systems.

In 1985 Preussag took over the majority of the C. Deilmann AG share capital. The Deilmann Group is engaged in exploration and production of petroleum and natural gas, exploration and mining of uranium and production of peat. Furthermore it offers mining, drilling and building services and undertakes in the metal processing sector, the design and construction of industrial installations, as well as general engineering. □

Price Waterhouse

PRICE WATERHOUSE is one of the world's leading professional service firms. Our professionals provide a wide range of innovative accounting and auditing, tax, management consulting, and specialized services to a diverse, worldwide clientele. Price Waterhouse member firms maintain almost 400 offices in 99 countries and territories, with total staff of 30,000 men and women. The U.S. firm has 100 offices with almost 800 partners and a total staff of about 12,000.

Our existing practice, which includes companies that vary in size from start-up ventures to giant multinationals, has earned for us a reputation as a leader in providing the highest quality services. This position is the culmination of decades of constructive and innovative service to our highly valued clients.

Price Waterhouse and Treuarbeit's range of services, depth of experience and diveristy of clients allow us to provide superior and distinctive services to the German business community. A total staff of over 1,000 professionals, including 230 Wirtschaftsprufer, is located in offices in Berlin, Bonn, Bremen, Dusseldorf, Frankfurt, Hamburg, Hanover, Kassel, Kiel, Munich, Saarbrucken, and Stuttgart.

Accounting and Auditing—Our auditing philosophy is to audit the business, not just the books. Our clients receive services tailored to their specific circumstances, based on a thorough understanding of the business and the environment in which they operate. With our audit, management can be assured that we will be alert for all opportunities for improvements. Our recommendations often point the way to significant operating economies, in addition to helping protect assets and provide more meaningful information to management.

Tax Services—Almost every business decision has tax implications, and close attention to tax planning and compliance has become increasingly important for businesses and individuals. Price Waterhouse tax professionals work closely with management to help minimize taxes and cope with ever-expanding tax rules. We provide a full range of services, including tax planning and tax return preparation for expatriates and nonresident aliens as well as assistance with tax audits. In addition, we have sophisticated computer-based systems that calculate foreign source taxable income, foreign tax credits, earnings and profits, and earnings repatriations.

The constant change in rules and regulations for doing business at home or abroad makes it imperative that we help management respond to—and even anticipate—changes. Among other ways, we do this by preparing a series of guides that provide comprehensive information on accounting and tax regulations, investment climates, and other business issues in individual countries. Of special interest to German/U.S. businesses are many of our publications, including: *Doing Business in Germany, Doing Business in the United States, Investitionen in den U.S.A., German Employees Assigned to the U.S., U.S. Citizens Abroad, Foreign Nationals in the U.S., Doing Business in the European Communities, Investieren in U.S. Immobilien*, and *Getting Government Help.* There are also several bilingual guides for doing business in individual key states. These publications are available through our offices worldwide.

Management consulting service—Our worldwide complement of experienced consultants can provide practical advice on virtually all facets of business operations, including financial management, information processing, EDP and inventory control systems, office productivity, strategic planning, and comprehensive marketing services. Our management consultants help businesses define their goals and develop and implement the necessary strategies, organizational structures, and information systems. □

PUERTO RICO, major Caribbean tourist destination for over one million visitors every year, also has a beautiful climate for industrial investors.

Measuring 100 miles long by 35 miles wide, the island was discovered by Columbus in 1493. After four centuries of Spanish colonial rule, Puerto Rico became part of the United States following the Spanish-American War of 1898. In 1952, Puerto Rico became a Commonwealth, freely associated with the United States, with considerable governmental autonomy (including local tax jurisdiction).

Puerto Ricans are U.S. citizens, their currency is the U.S. dollar and their government is a representative demoeracy with a bicameral Legislature, Governor, and a Resident Commissioner, who serves in the U.S. House of Representatives.

Under its "Operation Bootstrap" industrial development program over the past 45 years, Puerto Rico has promoted over 2,000 manufacturing establishments. This is the driving force for a middle-level economy which generates over $21.6 billion in annual exports and imports—the fourth largest trade volume among all the nations south of the mainland U.S.

Puerto Rican-source income from eligible manufacturing or service operations receives a 100% tax credit from the U.S. Internal Revenue Service upon repatriation to mainland

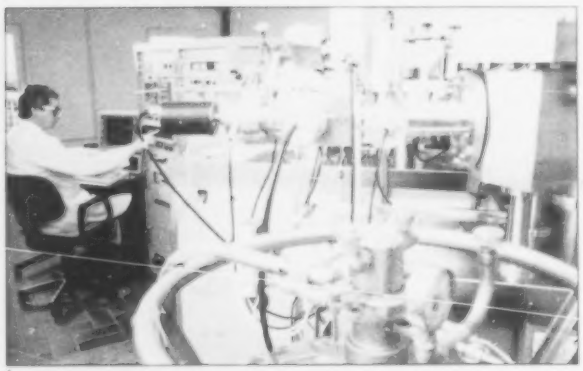
PREUSSAG

Preussag Aktiengesellschaft, headquartered in Hannover, is the Holding Company of a Group with interests in manufacturing, trading and services.

Preussag's domestic activities include
- mining of non-ferrous metal ores, production of lead, zinc and their alloys as well as pure metals,
- leasing of railroad tank cars, operating of inland waterway ships and offshore supply boats as well as tank farms,
- exploration and production of oil, gas and coal,
- construction services, i.e. pipeline and waterworks construction as well as fire protection equipment.

The international part of the Preussag business was of increasing importance during recent years. A breakthrough was the acquisition of a major shareholding in Amalgamated Metal Corp. PLC, (AMC), London, which enabled Preussag to obtain access to the trading on the London Metal Exchange and to offer worldwide services in non-ferrous metal trading besides AMC's interests in tin smelting and other activities.

Sales of the Preussag Group (world) in 1986 totalled DM 8,1 billion and the number of persons employed was 27,402.



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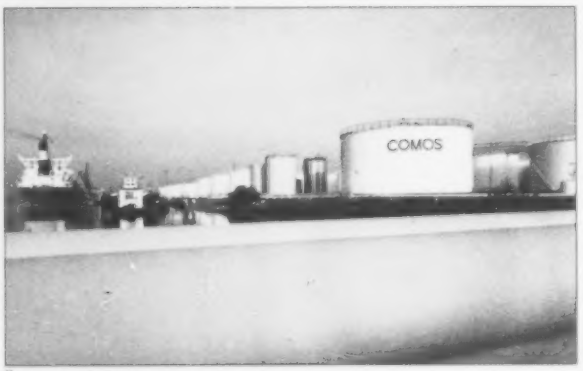


2

3

4

1 The glow discharge mass spectrometer serves to trace residual impurities in the sub-ppb range and is an indispensable accessory in the production of high purity materials for electronics; Preussag Pure Metals GmbH
2 The Comos-Tank B.V. marine terminal in Amsterdam provides 553.00 m^3 storage capacity
3 PB-KBB Inc. is a leader in the field of subsurface storage technologies; the picture shows staff during commissioning of the "compressed air in sandstone" pilot project, Pittsfield, Illinois
4 Mill complex of the uranium mine Key Lake

Preussag AG · Leibnizufer 9 · 3000 Hannover · Germany

U.S. parent organizations. Companies established on the island also receive 90% exemption from Puerto Rico's corporate taxes. These incentives and other advantages generate profit-to-sales ratios for manufacturers that are two-to-six times over the results achieved by comparable U.S. mainland operations.

Among other things, Puerto Rico offers highly-skilled workers, factory productivity that is double the mainland U.S. average, world-class air- and marine-cargo transportation and communications infrastructure, and ready-for-occupancy industrial buildings under very favorable lease terms.

Puerto Rico is inside the U.S. Customs system; there are no quotas, no duties.

Today, this Island Commonwealth is being "rediscovered" by growing numbers of mainland U.S. and European manufacturing companies and service industries.

Well-known European corporations with substantial industrial investments in Puerto Rico include:

Boehringer Ingelheim Int'l. GmbH, Boehringer Mannheim Corporation, Optische Werke G. Rodenstock, and Sartorius GmbH of the Federal Republic of Germany; Chanel Inc., and L'Oreal S.A., of France; Nestle S.A., F. Hoffmann-La Roche & Co. Ltd. and the Sandoz Corporation of Switzerland; ICI Imperial Chemical Industries PLC, Brown Boveri Kent Ltd., and the Hawker, Siddeley Group PLC of the United Kingdom.

Puerto Rico's industrial attraction program is carried on by the Economic Development Administration. For additional information write to: Commonwealth of Puerto Rico, Economic Development Administration, Department of Promotional Services, 1290 Avenue of the Americas, 35th Floor, New York, New York 10104. □

Pump

Do you export machinery and equipment to Africa, Australia, Canada, the Far East, or the United States? If so, you are faced on a daily basis with the challenge of meeting the prevailing electrical norms (UL/CSA/NEMA/IEC) of the country of destination so that your apparatus meets every single requirement. As an authorized main distribution partner in the Federal Republic of Germany, PUMP GmbH offers you a wide variety of products produced by U.S. manufacturers. The firm specializes in electro-technical material meeting UL, NEMA, IEC and CSA norms for incorporation into your machinery and equipment for export.

In addition, Pump GmbH offers complete purchasing services in the U.S. market. That means: access to all U.S. manufacturers of electro-technical materials for your specific projects, even for the smallest consignments. Regular weekly air and sea-freight shipments enable us to fill your orders at a reasonable cost. If you wish to take advantage of our experience and contacts and want to see how you can save money and time, as well as unnecessary attention on the part of your personnel by using a central purchasing organization, contact us at:

PUMP GmbH
Roedelheimer Landstr. 44-48
6666 Frankfurt (Main) 90
Telephone: 069/77 06 91
Telex: 413697 pump d
Telefax: 069/70 62 18. □

Rodenstock

The RODENSTOCK GROUP, with headquarters in Munich, is one of the world leaders in ophthalmic optics. The family-owned company entered its second century of operations in 1977 under the management of Professor Dr. Rodenstock, until recently the president of the Federation of German Industries (BDI).

In addition to six plants and eleven branches in Germany with over 6,000 employees, there are four German and seventeen foreign subsidiaries with several manufacturing facilities.

Rodenstock products cover a wide range: ophthalmic lenses, a comprehensive line of plastic and metal frames and sunglasses, precision optics for commercial, industrial and scientific applications including photographic, enlarging, reproduction and X-ray objectives as well as a complete line of ophthalmological refracting and diagnostic instruments and automatic processing equipment for opticians.

In the United States the Group maintains the following operations:

Rodenstock USA, Inc., Danbury, CT
Rodenstock Corporation, Yauco, PR
Rodenstock Precision Optics, Morton Grove, IL
Felix Mendelson Co., Los Angeles, CA

A full range of progressive lenses, refracting and diagnostic instruments produced in Germany and the WECO instrument line are represented in the United States by Coburn Optical Industries, a Revlon subsidiary.

Steady growth and expansion continue to mark Rodenstock's active engagement in the United States. □

sto®

The STO group of companies is the System's Technology Organization of wall systems for the construction industry.

STO traces its history back to 1836 and a small cement and lime company in West Germany's Black Forest. In 1954, under the direction of Wilhelm Stotmeister, STO introduced the first synthetic-resin wall coating in the world. Over the past thirty-two years, under the direction of its European parent company—Stotmeister GmbH in Stuhlingen, Germany—STO has expanded so rapidly that offices and distribution centers have been established throughout Europe and in many areas around the globe.

On the North American continent, the STO Corp. owns STO Industries, Inc. which operates manufacturing facilities in Rutland, Vermont and Atlanta, Georgia that support a sales force and a national network of distributors.

The STO Corp. also owns the Powerwall Corporation which operates manufacturing facilities in San Antonio, Texas and Phoenix, Arizona, and supports a broad dealer network for its own Commodity Product Line.

The product line for the STO network of companies includes:

Exterior Insulation Systems and Finishes
Interior & Exterior Coatings:
- Cementitious
- Polymer
- Silicon
- Silicate
- Solvent

Concrete Restoration Systems
Acoustical Insulations Systems
One-Coat Stucco Systems □

Salomon Brothers

One of the oldest and largest investment banking firms in the United States, SALOMON BROTHERS, is an international investment banking firm which makes markets in securities and provides a broad range of underwriting, financial advisory and research services to governments, corporations and institutional investors around the world. Headquartered in New York, the firm serves 5,000 customers worldwide through its international offices in London, Tokyo, Zurich and Frankfurt and U.S.-domestic offices in Atlanta, Boston, Chicago, Dallas, Los Angeles and San Francisco. Securities purchases and sales surpassed the $4 trillion mark in 1986. The six months average daily net inventory of securities was $20.2 billion. The firm's capital ending 1987 was a record $3.3 billion.

Salomon Brothers has been the leading firm in domestic securities underwriting for the past four years. The firm has become a leader in traditional syndicated equity offerings, block and options trading and stock index futures, as well as innovative equity financing techniques. A combination of distribution skill and client service accounts for Salomon Brothers strong performance in the debt and equities markets in 1986, capturing a 19% share of the debt market and a 12% share of the equity market. In private placements, Salomon Brothers has placed approximately $45.5 billion of private financings during the past seven years—ranking first in volume during five of those years. During 1986, Salomon provided merger, acquisition and divestiture assistance to over 160 clients resulting in over 130 transactions ranging in size from $10 million to over $6 billion.

Salomon Brothers has long been noted for its risk orientation in the service of clients as it underwrites and trades on an international scale. In 1971, Salomon Brothers established Salomon Brothers International Limited which provides a full range of financial services including international financings, advising on such matters as listing requirements, investor relations and choice of co-managers. A leading market maker in the secondary market, the London office trades issues from many countries, denominated in all principal trading currencies. In addition, Salomon Brothers' experts initiate a number of specialized transactions involving currency risk management for many international corporations. Among these financing techniques are currency swaps, long-term forward contracts and currency options.

Another outstanding capability of Salomon Brothers is its economic and financial research, which is integrated with customer and market intelligence flowing through the trading rooms. Under the direction of Henry Kaufman, via four departments, the firm's Research Department has more than 300 professionals worldwide in four areas: Bond Portfolio Analysis, Equity Research (covering 570 companies in 51 industries), Bond Market Research and Corporate Bond Research.

Research products include analyses of domestic and international fiscal and monetary policies, credit flows in the U.S. economy, currency-related securities values, yield differentials, corporate capitalizations, institutional portfolio strategies and analytical reports on industries and corporations. The Bond Portfolio Analysis Group performs a highly sophisticated service for institutional investors, advising customers on the structure of portfolios.

Salomon Brothers' performance is achieved through global teamwork whose common principal resources are people, capital and technology. □

SCHLEICHER

When you come from the city of Berlin to Spandau you will recognize from a distance already the blue hexagon on the striking yellow building: symbol of a successful traditional enterprise. Founded in 1937 by Senior Engineer Otto SCHLEICHER and—after destruction and dismantling—newly established and developed to a modern industrial enterprise by his son, Senior Engineer Helmut Schleicher, the Schleicher relay works stand today for manufacturers of excellent precision time delay relays and program control equipment, in Germany and in the world. From the very beginning it was the capability to participate in the technological relay progress by pioneer work which secured the success of the Schleicher relay works. The secret of the success of Schleicher relays is functionality. The convenient time adjustment and range selection, the at-a-glance function display, stylish standardized housings, universal surface and recessed mounting facilities are as convincing for the relay user as the clear plastic cover which reveals the high-precision "interior" of every Schleicher time delay relay.

There is another field in which Schleicher's lead in relay engineering is obvious—the use of modern plastics. Whereas a time delay relay previously consisted of over 260 components, relays have now been reduced to a mere 80 or so precision parts that are simply fitted together.

The technical development activities of the Schleicher works are mainly concentrated on the quality improvement and quality assurance of the mechanical and electronic time delay relays as well as on the necessary expansion in the field of electronic control systems.

From the most simple programmable control system of the compact type to the multiprocessor system for bit and word processing this product range occupies today a large space in the comprehensive Schleicher program.

This technology is manufactured in the Berlin works as well as in the affiliated Munich subsidiary, Schleicher Electronic GmbH & Co. KG, concentrating especially on customer-specific controls.

The Schleicher company offers service in all parts of the world for the relay as well as for the control systems program by competent consultant offices and representatives. □

SCHOTT GLASS TECHNOLOGIES INC

Commencing operations in 1969, SCHOTT GLASS TECHNOLOGIES INC., Duryea, Pennsylvania has grown to be the United States' foremost manufacturer of scientific optical glass. With the exception of its parent, Schott Glaswerke, the firm offers the world's most comprehensive variety of optical glasses.

Since the founding in 1884 of the original Glastechnisches Laboratorium Schott und Gen., the Schott name has been synonymous with quality and innovation in glass. Schott Glass Technologies Inc. not only follows in this tradition, but has developed many new glass types for special applications within the Western Hemisphere. This is exemplified by the recent completion of Schott's latest expansion—one of the most modern glass research and development laboratories. Schott is now conducting research for Western Hemisphere customers right here in the United States on a much broader basis.

Schott Glass Technologies Inc. manufactures precision glass products for a multitude of scientific applications. The industries can be broadly described as ophthalmic, scientific optical, as well as numerous highly specialized markets.

Among the ophthalmic products manufac-

tured by the firm are spectacle lens blanks made of traditional white and colored glasses, as well as photochromics, safety, and special purpose glasses. The firm was awarded the Industrial Research IR-100 Award for developing High-Lite®, a special glass which allows high prescription spectacle lenses to be made with greatly reduced thickness. Schott has recently expanded its ophthalmic line with the introduction of SunMagic®, a photochromic sunglass lens which is featured in many of the world's most fashionable sunglasses.

The mainstays of the precision optical product line include over 400 types of glasses to satisfy the needs of optical instrument makers in the Western Hemisphere. Augmenting these glasses are specialty products, such as highly sophisticated laser glasses, radiation shielding glass, scientific color filter glass, glasses for fiber optics applications, and glasses for CRT's and other displays. Many new developments are for specialty applications in the military and industrial fields.

Schott officers are: Franz E. Herkt, President; Henning Fuhrmann, Vice President of Operations; and John G. Gulbin, Vice President of Finance. □

SCORPIO Ford

SCORPIO and XR4Ti are the renowned European performance automobiles sold in limited number by select Lincoln-Mercury dealers in the United States.

Sales of European-made automobiles have increased steadily in the U.S. during the last decade—and both Scorpio and XR4Ti provide Lincoln-Mercury entry into this growing market with driver-oriented cars, designed and engineered by Ford of Europe. Ford has been building automobiles in Europe for over 75 years, longer than many other established carmakers.

The XR4Ti sports coupe was introduced to American buyers in March 1985. XR4Ti is a two-door hatchback designed by Ford of Germany and based on the European Ford Sierra. XR4Ti is built by Karmann, the well-known German coachbuilder. It is powered by a turbocharged 175-horsepower four-cylinder engine and can accelerate from 0-to-60 mph in 7.8 seconds. XR4Ti also features independent suspension, rack-and-pinion steering, rear-wheel drive, a well-equipped interior, and room for five passengers.

To date, more than 31,000 XR4Tis have been sold through 730 Lincoln-Mercury dealers in the U.S. Joining XR4Ti as part of Lincoln-Mercury's import brand is the new Scorpio touring sedan, which debuted in May 1987. Scorpio is a five-passenger, four-door automobile built by Ford of Germany. It is powered by a 2.9-liter V-6 engine, and comes with the Anti-Lock Brake System (ABS), independent suspension, and a highly detailed and spacious interior among its many standard features. Scorpio was named *Car Of The Year* when it was first introduced in Europe, a title earned only after the scrutiny of 54 journalists from 17 countries. It has also received the German Safety Award and sixteen other prestigious honors.

Availability of Scorpio will be limited to about 10,000 units annually. □

Seidman & Seidman | BDO

BDO is a leading international accounting organization offering clients professional auditing, taxation, and financial and management advisory services, nationally and abroad.

BDO is the oldest European-based international accounting firm. It has more than 300 offices in 50 countries, and 11,000 partners and staff. BDO was founded as a European partnership which was organized, and has grown, in response to the harmonization of trade regulations directed by the EEC.

Our German partner firm, Deutsche Warentreuhand-Aktiengesellschaft (DWT), is among the largest firms in Germany, with offices in Berlin, Cologne, Duesseldorf, Frankfurt/Main, Freiburg, Hamburg, Hannover, Kiel, Luebeck, Munich, Stuttgart and Wiesbaden.

In the United States, German clients are served by SEIDMAN & SEIDMAN/BDO, a 78-year-old firm with offices in over 45 U.S. cities. At Seidman & Seidman/BDO, work for German clients is handled by resident Wirtschaftpruefer and Steuerberater in cities around the country. BDO is presently serving a substantial number of U.S. subsidiaries of German parent companies. Bilingual professionals are fully informed about complex and changing American accounting and tax regulations, and thoroughly familiar with German auditing, accounting and reporting requirements. They have expertise in all major industrial and financial fields.

Along with expertise on the technical aspects of finance and taxation, we understand the environmental, economic, marketing and cultural differences between the U.S. and Germany. This knowledge enables us to assist our German clients with mergers, acquisitions and start-ups in the U.S.

Seidman & Seidman/BDO has a special international services group headed by Paul E. Neubelt, partner, headquartered in New York. He is a U.S. Certified Public Accountant, who worked and lived abroad for 13 years. Two German Wirtschaftspruefer work with him: Gunther Strothe in New York, and Peter Thiessen in Chicago.

The key to our service is the quality of our professionals, who combine international scope and experience with a thorough knowledge of local accounting and business. Close working relationships between our U.S. and German partners guarantees prompt, attentive, personalized service on both sides of the Atlantic. Our partners are highly regarded in the business community. They can provide the invaluable link to business, financial and legal contacts in the U.S. They have successfully helped many multinational corporations establish new enterprises in the U.S. and provide start-up, international tax structuring, advice and compliance with new consolidation requirements in Germany and Europe. They also assist German companies seeking to have their shares listed on one of the U.S. stock exchanges using American Depository Receipts.

Call us for more information about how BDO can help make your business in the U.S. a success. In New York contact: Paul E. Neubelt, CPA, Gunther Strothe, WP/StB, CPA at: Seidman & Seidman/BDO, 15 Columbus Circle, New York, NY 10023, (212) 765-7500, Telex: 661-903, FAX: (212) 315-1613; or H. Peter Thiessen, WP/StB in Chicago at: 111 East Wacker Drive, Suite 2800, Chicago, IL 60601, (312) 644-7400, TWX: 910 221-0381, FAX: 312-565-2499. □

SIEMENS

The SIEMENS companies in the United States have grown into an organization which will end the 1986-87 fiscal year with more than 25,000 employees and sales in excess of $2.5 billion. The interests of Siemens in the United States are supported by three service companies, five Siemens-named operating companies, three other wholly-owned companies, and a number of other joint ventures.

Siemens Capital Corporation, New York City, one of the three service companies, is the shareholding company for Siemens AG.

In addition, Siemens Capital provides certain financial, legal, accounting, corporate relations and merger and acquisition functions. Siemens Corporate Research and Support, Inc., Iselin, New Jersey, administers the Research and Technology Laboratories in Princeton, New Jersey as well as the purchasing, patents and licensing, traffic, and advertising and design departments. The third service organization is Siemens Credit Corporation, Boca Raton, Florida.

The operating companies mirror and closely coordinate with their respective groups and companies in Germany. Siemens Medical Systems, Inc., and Siemens Components, Inc., Iselin, New Jersey; Siemens Communication Systems and Siemens Information Systems, Inc., Boca Raton, Florida and Siemens Energy & Automation, Inc., Atlanta, Georgia are the American counterparts of the Munich and Erlangen-based groups.

Hell Graphic Systems, Inc. Port Washington, New York, and OSRAM, Inc., Newburgh, New York represent the Kiel and Munich-based companies in the pre-press and lighting industries respectively. Advanced Nuclear Fuels, Inc., the third, non-Siemens named operating company, was acquired by Siemens-owned Kraftwerk Union at the end of the 1986 calendar year. Located in Bellevue, Washington, Advanced Nuclear Fuels processes fuel for use in nuclear energy facilities in the United States and other parts of the world.

Siemens joint venture companies are in such fields as fiber-optic communications, numerical controls and power generation.

In total, the Siemens companies in the United States represent about 10% of the company's entire revenues as well as an increasingly greater presence in the world's largest electro-market. □

STINNES CORPORATION, New York, is a wholly owned subsidiary of Stinnes AG, Muelheim, West Germany, a member of the VEBA Group of companies. As a holding company, Stinnes Corporation monitors the trading, distribution, export and import activities of its subsidiaries and joint-venture companies in the United States. Stinnes presently is engaged in four major product lines.

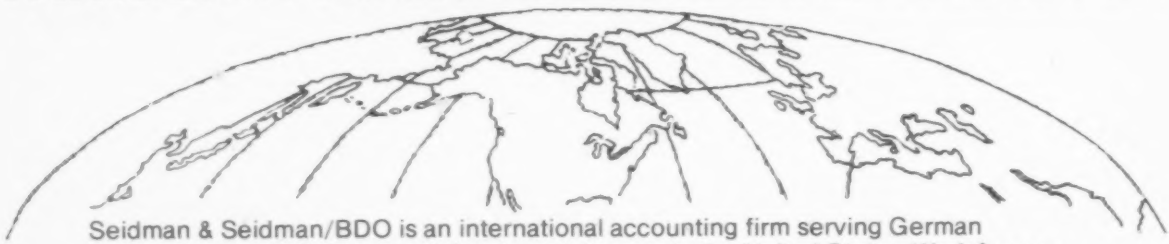
Stinnes Interoil, Red Bank, New Jersey is a major supplier of heating oil and other oil products to utilities and industry. Stinnes Coal Company, Inc., with offices in New York and Kentucky, markets U.S. steam and metallurgical coal both on a domestic and export basis. F & S Alloys and Minerals Corporation, New York and Miller and Company, Chicago serve the domestic foundry and steel industries with a wide spectrum of alloys, ores, minerals and other raw materials from worldwide sources.

The chemical distribution activities of Stinnes consist of three strong regional distributors: Textile Chemical Co., Inc., Reading, Pennsylvania; Delta Distributors Inc., Longview, Texas; and SOCO-Western Chemical Corporation, Los Angeles, California. International chemical trading including international sourcing is performed by Brenntag Interchem, Inc., Philadelphia, Pennsylvania.

Other ventures include freight forwarding services provided by Rhenus International Transport Corporation, New York, steel trading and distribution by Steelinter Inc., New York and the repair and rebuilding of diesel engine components by Precision National Plating Services, Inc., Clarks Summit, Pennsylvania.

Total sales of the U.S. Group are expected to be approximately $1 billion in 1987. All subsidiaries are actively expanding their operations. □

STEUERBERATUNG UND WIRTSCHAFTSPRÜFUNG IST UNSER GESCHÄFT



Seidman & Seidman/BDO is an international accounting firm serving German companies and individuals with business interests in the United States. Work for our German clients is under the direction of resident Wirtschaftsprufer and Steuerberater. Our experienced partners can work with you in both countries providing the important link you need to business, financial and legal contracts in the U.S.

We offer:
- start-up assistance
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- accounting & auditing
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111 East Wacker Drive, Suite 2800, Chicago, Illinois 60601 (312) 644-7400 TWX: 910 221-0381 Seidmanbdo cgo FAX: (312) 565-2499

THYSSEN

THYSSEN INC., a wholly owned subsidiary and member of the West German Thyssen Group, is a major U.S. and international trading concern, which has its headquarters in New York City.

The steel products of the Thyssen mills as well as industrial products of various Thyssen enterprises have been sold in the U.S. for many years. As the demands for these products increased, it became necessary for the Thyssen Group to establish a company to facilitate communications, order entries and achieve more complete penetration between Thyssen and its customers.

Thyssen Inc. was founded in mid-1959. Since its formation, Thyssen Inc. has continually expanded its U.S. and international operations by adding various new lines of activities to the original business of importing steel. As a result, Thyssen Inc.'s organizational set-up was restructured in the beginning of 1981 with the formation of three major divisions, Thyssen Steel Co., Thyssen Carbometal Co. and Thyssen Rheinstahl Technik Co.

Thyssen Steel Co. expanded its direct domestic sales representation with offices in Houston and Los Angeles and with the formation of divisions and/or subsidiaries to handle and establish various additional lines of business.

In the 1970's, Thyssen Steel Co. entered the domestic market of steel warehousing with the establishment of Thyssen Metal Service/Southwest and later on with Thyssen Metal Service/Southeast, Thyssen Metal Service/West Coast and Thyssen Steel Detroit Co. These service centers and distributors supply the Southwest, Southeast, Northeast, the Midwest and Great Lakes areas and the West Coast respectively with rolled steel products.

At the same time, Thyssen Carbometal Co. established a worldwide business in raw materials, mainly coal and iron ore, steel scrap and secondaries.

Today the combined operations of Thyssen Inc. employs almost 250 people in various parts of the country. The company's activities include international raw material trading, warehousing and steel service center operations in the U.S., as well as sales of industrial products and mining equipment.

With such dynamic growth, Thyssen Inc. has become a major factor in the domestic steel community and in international trading. □

Touche Ross

TOUCHE ROSS is a major professional services firm providing comprehensive accounting and auditing, tax, management consulting, and other specialized services throughout the United States. We provide these services to approximately 100,000 clients of virtually every size, complexity, and nature, representing all major segments of the economy—business, industry, and government.

Today, Touche Ross operates from 83 practice locations with a National Office in midtown Manhattan, a Financial Services Center on Wall Street, and a Washington Service Center in Washington, D.C. Professionals and support staff total some 8,500, including 800 partners and principals.

Through Touche Ross International (TRI), we serve clients wherever they do business. TRI brings together 53 member firms operating in 88 countries from 484 offices worldwide. Member firms have a total of 30,000 professionals and support staff, including some 2,800 partners and principals.

Our growth record is impressive. Domestically, Touche Ross revenues more than tripled from 1978 through 1987, the most competitive ten years in the profession, with growth occurring in all functions. During this same period, TRI member firms have tripled worldwide revenues.

Over the years, Touche Ross has developed the capabilities to serve the needs of a broad range of industries. We have significant experience in such industries as aerospace and defense, apparel and textiles, banking, construction, energy, financial, food, health care, high technology, insurance, manufacturing, media, the public sector, real estate, retail, savings institutions, securities, services, transportation and utilities, travel and leisure, and wholesale. □

UNION AIR TRANSPORT GmbH, their headquarters being located in Baldwin, New York, opened its first USA offices in 1959. The company now has 11 operational offices in the United States, and is an affiliate of one of the largest West German forwarders, UNION-TRANSPORT GmbH, in Duesseldorf.

All phases of forwarding services, including export/import, NVOCC and expediting operations are handled by Union Air Transport's 2,500 highly qualified employees. Spear-headed by Mr. P. Robert Doernte, General Manager, the vast network is continuing its expansion in the Americas.

Each branch has its own warehouse operation, and their experienced staff and modern equipment offer all shippers an excellent customer service.

Union Air Transport's offices are equipped with the latest operational software ensuring that customers receive the best service available. From a shipment tracing system to an on line information retrieval system to an electronic document transmittal system, Union Air Transport maintains a state of the art computer center, the sole function of which is keeping current with available software, while custom tailoring customer's specific needs whenever and wherever possible. Furthermore, we are compatible with most hardware, enabling customers to tie into our systems.

Union Air Transport's air and ocean departments continue to service their clientele better than ever before. Their activities, facilities and services are updated and expanded constantly. During the past year their NVOCC Service to European destinations was initiated and is now fully operational, with expansion planned to several other destinations. This new operation should contribute to another successful year in the company's long history. □

VAW aluminum

V.A.W. OF AMERICA, INC. has been operating in Ellenville, New York since October 1965. The company, wholly owned by Vereingte Aluminum-Werke AG-Bonn, is a major producer of aluminum billet and semi-fabricated products. The V.A.W. Ellenville plant consists of an aluminum casting operation for the production of over 100 million pounds of billets in various sizes and different alloys. This constituted the basis for construction of the firm's extrusion presses and its tube drawing and rigid conduit production facilities.

Since 1979, V.A.W. has been operating a second plant in the United States, located in St. Augustine, Florida. This plant produces the same range of extruded and drawn alumi-

UNION AIR TRANSPORT

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INTERNATIONAL AIR FREIGHT FORWARDERS - OCEAN FREIGHT FORWARDERS -
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IATA AGENTS

num products and is equipped with the most advanced electro-static paint line, enabling V.A.W. to supply coated aluminum extrusions and tubing.

In an area of aluminum extrusions, V.A.W. operates seven large presses covering the entire range of shapes from small, lightweight profiles for the building market, to heavy and complex configurations in various aluminum alloys for the construction, transportation and electrical industries. A major specialty in extrusions has been the development of close tolerance tubing and pipe, used for example in lighting standard and sailboat masts. Through years of technical development, V.A.W. expertise in these areas has led to major breakthroughts for the fabricating industry.

Another major product line is drawn aluminum tubing. The availability of advanced equipment (such as cable hydraulic draw benches), combined with technical leadership in the area of tube drawing, has enabled V.A.W. to become a major supplier of tube for consumer durable products and, in particular, outdoor lawn and garden furnishings and other specialty markets.

Over the years, V.A.W. of America has achieved a position as a leading supplier of rigid aluminum conduits for the electrical industry, and distributes aluminum conduits through a network of warehouses throughout the United States.

The V.A.W. operations are backed by a complete R & D and testing laboratory. The laboratory utilizes diverse testing equipment, including ultra-modern electro-spectrographic analyzing machinery.

V.A.W. plans to apply its knowledge and expertise through the years to ensure its continued position as a major supplier of extrusions and tubing to the growing aluminum market in the United States. □

VEREINS-UND WESTBANK today is one of the leading regional banks in Germany with its Head Office in Hamburg and a network of more than 260 branches in the States of Hamburg, Schleswig Holstein and Lower Saxony. In August 1987, a main branch was opened in Frankfurt to offer banking services to present and potential clients in southern Germany. The bank was formed by the merger of Westbank, whose branch network gave it a strong diversified funding base, and Vereinsbank, whose strength was based upon regional corporate business and international banking with emphasis on international trade financing, foreign exchange and securities business.

As a "universal bank," Vereins-und Westbank offers a full range of commercial and investment banking services to domestic and international corporations, private individuals, governmental institutions and correspondent banks. In addition to providing all types of credit facilities, foreign exchange services and accepting deposits, it is also actively engaged in underwriting and trading securities of both domestic and foreign issuers, as well as providing assistance to clients seeking to raise equity or bond financing in the German market. The bank also specializes in portfolio management services, including investments in shares, bonds, deposits and precious metals. In addition, the bank holds equity participations in industrial corporations as well as in banks.

The international activities have formed a substantial part of the bank's business ever since its founding in 1856. Through its own offices abroad and its correspondents in over a hundred countries, the Vereins-und Westbank Group provides the full range of international banking services. Through its wholly-owned subsidiary, Vereins-und Westbank Internationale S.A. in Luxembourg, the bank is engaged in Euromarket lending activi-

ties, securities, foreign exchange and trading of precious metals.

Vereins-und Westbank has a State Agency in Miami, which provides a comprehensive range of Banking services including all aspects of portfolio management for private individuals. It is also active in international finance of exports from selected Latin American countries.

The bank maintains representative offices and business development centers in New York, Atlanta and Buenos Aires. These are specialized in trade finance and international finance. They provide their customers with in-depth consultation and expeditious response to their finance requirements. □

WestLB

WESTDEUTSCHE LANDESBANK GIROZENTRALE (WestLB) was established in 1969 by the merger of Rheinische Girozentrale und Provinzialbank, Düsseldorf (est. 1854) and Landesbank für Westfalen Girozentrale, Münster (est. 1832). WestLB is a credit institution in the legal form of an institution under public law. The Bank's owners (the State of North Rhine-Westphalia and the Sparkassen (Savings Bank Organisations and Regional Associations of the Rhineland and Westphalia-Lippe) are jointly and severally liable for WestLB's obligations.

With a group business volume of more than DM 186 billion, WestLB is the third largest bank in the Federal Republic of Germany and one of the largest universal banks in the world. WestLB offers its private, commercial and public sector clients in Germany and abroad a full range of services in the credit and investment business. With an outstanding volume of WestLB-bonds amounting to over DM 60 billion, the Bank is Germany's most significant constant issuer of bank bonds.

WestLB maintains branches and subsidiaries in those financial centres best suited to servicing the needs of its clients as well as representative offices in the most important trading regions. In addition to export and import financings, the Bank offers its internationally active clients international bond and loan financings in D-mark and Eurocurrencies. Its international network enables WestLB to meet clients' needs for cover in all important currencies and to handle their international payment transactions.

WestLB is both clearing and partner bank to the 159 Sparkassen in NRW. As part of its cooperative working relationship with the Sparkassen, the Bank also handles the foreign business of their clients. In addition, WestLB acts as banker to the State of North Rhine-Westphalia and handles trustee business for the Federal Republic of Germany and NRW amounting to over DM 40 billion. The Bank supports NRW in promoting economic development and residential housing construction.

WestLB New York branch offers a broad spectrum of flexible banking services tailored to the needs of the multi-national firms already doing business in the U.S. WestLB's capability to package its financing to suit U.S. market requirements ensures its clients of direct access and immediate fulfillment of demand for both financing and investment services.

The Bank's presence abroad and its participation in internationally operating institutions make WestLB a strong partner for all engaged in international business. □

OTTO WOLFF

OTTO WOLFF, headed by the Cologne-based OTTO WOLFF AG, is an international enterprise. The Group operates in a wide field of trade and production, with steel processing and machine and industrial plant installations representing the company's strongest sectors.

One prime center of activity is the production and distribution of tinplate, cold rolled sheet and electrical sheet. Incorporating all the latest functional technology, these materials meet the diverse demands of the packaging, automotive and electrical industries.

Rolling mill products such as profile steel, reinforcing bars and other construction elements, wire mesh, screws, and plastic goods as well, round out the program and show the emphasis laid on supplies in the fields of infrastructure.

Another significant part of the Group's activities involves the construction of highly specialized and complex technical apparatus. Whether in precision machinery, machine tools or measuring instruments, drilling rigs, earth-movers or material handling systems, heavy machines or complex industrial equipment, Otto Wolff's predominance in achievement and technology is beyond question.

With a constant eye on the market, ready to adapt Group structure to change, with first rate service and distribution performance and with strong financial power, Otto Wolff is a reliable and trustworthy partner.

International marketing, based on a range of Group owned overseas subsidiaries and agencies, guarantees rapid adaptation to current market trends.

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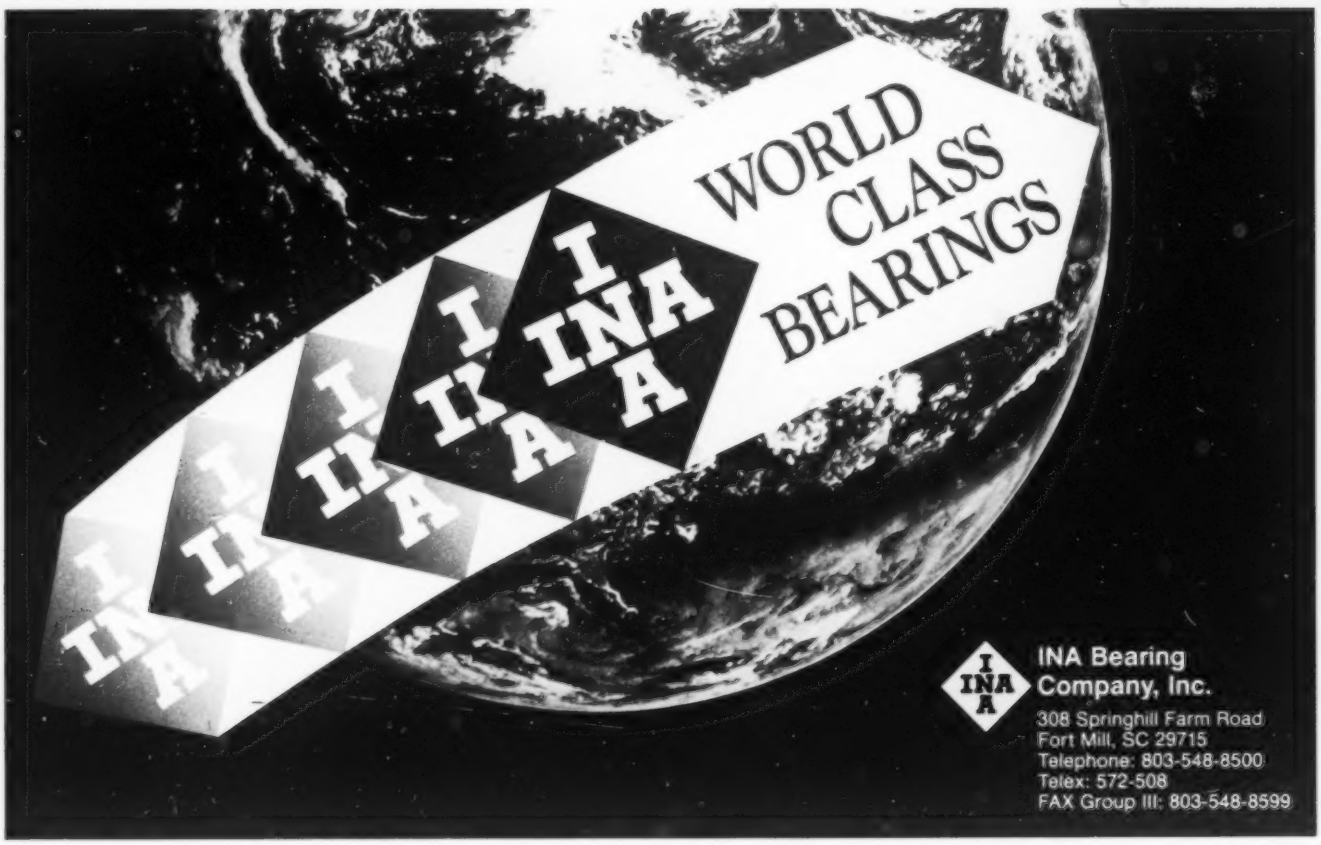

merce. Complimentary copies are available by writing Herbert A. Morey, Arthur Young, 277 Park Avenue, New York, N.Y., 10172.

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The company emphasizes research and development, and has a reputation for producing quality, cost competitive products.

ZF specializes in advanced drive train and steering components for a wide variety of on- and off-highway applications, including agriculture, construction and material handling vehicles, passenger cars, trucks, rapid transit buses, and pleasure and work boats.

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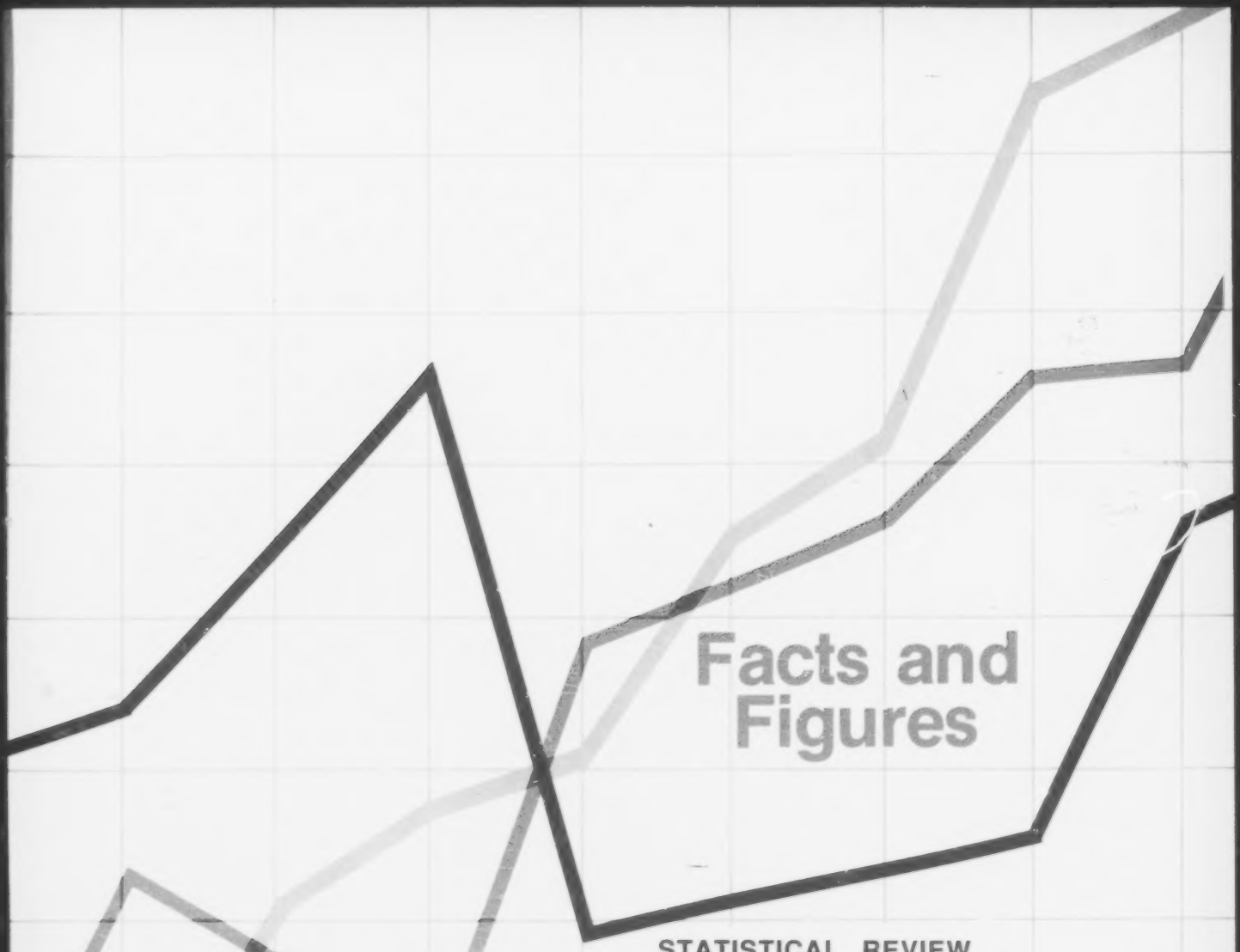

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ACKNOWLEDGEMENTS
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Statistical Review

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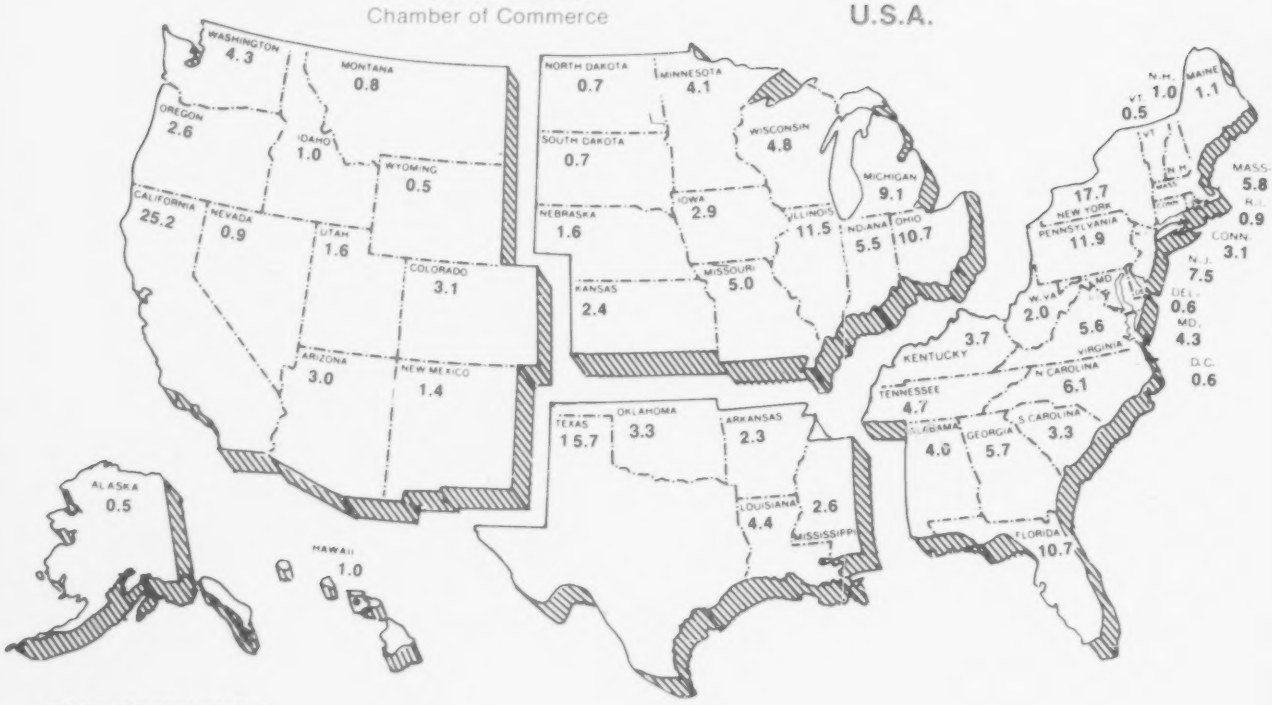


DEVELOPMENT OF POPULATION

Population Break (in mil.)	1960	1970	1975	1980	1983	1984	1985	1986
Area (in 1000 sq. miles)	3,618.7	3,618.7	3,618.7	3,618.7	3,618.7	3,618.7	3,618.7	3,618.7
Population (in mil.)	180.0	204.0	215.5	227.2*	234.0	236.1	238.7	241.1
—male	88.3	98.9	104.2	110.0	113.7	114.8	116.2	117.4
—female	90.9	104.3	109.3	116.5	120.3	121.3	122.6	123.7
Households (in mil.)	52.8	63.4	71.1	80.0	83.9	85.4	86.8	88.8

Source: U.S. Department of Commerce **Based on new benchmark levels. Not comparable with previously published data.*

Labor Market

Period	Civilian Labor Force	Employed	Unemployed	%
1960	69,628	65,778	3,852	5.5
1970	82,715	78,627	4,088	4.9
1980	104,719	97,270	7,448	7.1
1983	111,551	100,834	10,717	9.6
1984	113,877	105,748	8,130	7.1
1985	115,461	107,150	8,312	7.2
1986	118,586	110,637	7,949	6.7
Nov. 1987	120,616	113,500	7,116	5.9

Source: U.S. Bureau of Labor Statistics, Employment and Earnings

Unemployment by Duration (in %)

	LESS THAN 5 WEEKS	5-14 WEEKS	15-26 WEEKS	27 WEEKS AND OVER
1980	43.1	32.3	13.8	10.7
1981	41.7	30.7	13.6	14.0
1982	36.4	31.0	16.0	16.6
1983	33.3	27.4	15.4	23.9
1984	39.2	28.7	12.9	19.1
1985	42.1	30.2	12.3	15.4
Aug. 1986	42.3	29.4	13.4	14.9

Source: U.S. Council of Economic Advisers

GERMANY

DEVELOPMENT OF POPULATION

Population Break (in mil.)

	1960	1970	1975	1980	1983	1984	1985	1986
Area (in 1000 sq. miles)	96.0	96.0	96.0	96.0	96.0	96.0	96.0	96.0
Population (in mil.)	55.4	60.7	61.8	61.7	61.3	61.1	61.0	61.1
—male	26.0	28.9	29.4	29.5	29.3	29.2	29.1	29.3
—female	29.4	31.8	32.3	32.2	32.0	31.9	31.8	31.9
Households (in mil.)	19.3	22.0	23.7	24.8	25.3	25.3	25.3	26.4

Source: Statistisches Bundesamt, Germany

Labor Market

Period	Civilian Labor Force	Employed	Unemployed	%
1960	26,518	26,247	271	1.3
1970	26,817	26,668	149	0.7
1980	26,684	25,795	889	3.8
1983	27,589	25,331	2,258	9.1
1984	27,629	25,363	2,266	9.1
1985	27,844	25,540	2,304	9.2
1986	28,024	25,796	2,228	9.0

Source: Statistisches Bundesamt, Germany; Bundesminister der Wirtschaft, Germany

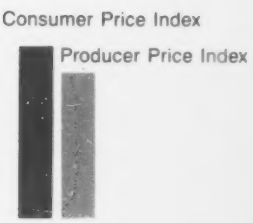
Unemployment by Duration (in %)

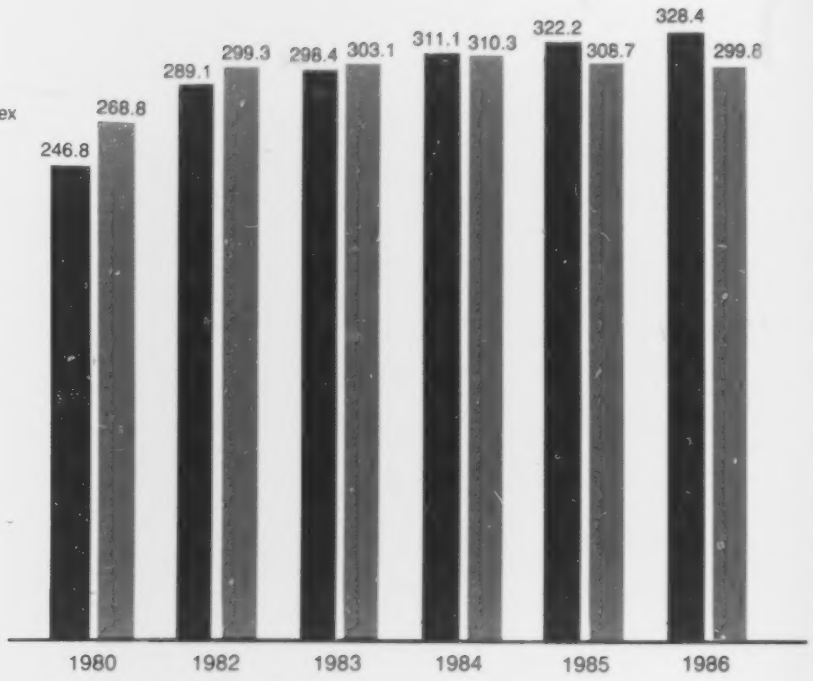
	LESS THAN 1 MONTH	1-3 MONTHS	3-6 MONTHS	6-12 MONTHS	1-2 YEARS	2 YEARS AND OVER
1980	21.2	28.2	18.6	17.6	9.8	5.8
1982	14.9	24.6	18.3	24.2	13.5	4.4
1983	11.5	22.1	17.0	24.5	17.7	7.2
1984	11.6	21.7	16.2	21.7	17.3	11.5
1985	12.3	20.2	15.8	20.7	16.9	14.1
1986	12.2	20.0	15.6	20.7	16.9	14.1

Source: Bundesanstalt fuer Arbeit

U.S.A.

PRICES AND WAGES





Wages and inflation (1967 = 100)

Source: U.S. Department of Labor

CONSUMER PRICE INDEX

Period		1967 = 100	Change from previous year %
1960	average	88.7	+ 1.6
1970	"	116.3	+ 5.9
1979	"	217.4	+11.3
1980	"	246.8	+13.5
1981	"	272.4	+10.4
1982	"	289.1	+ 6.1
1983	"	298.4	+ 3.2
1984	"	311.1	+ 4.3
1985	"	322.2	+ 3.6
1986	"	328.4	
Nov. 1987	"	345.8	

Source: U.S. Department of Labor

PRODUCER PRICE INDEX

Period		1967 = 100	Change from previous year %
1960	average	94.9	+ 0.1
1970	"	110.4	+ 3.7
1979	"	235.6	+12.6
1980	"	268.8	+13.8
1981	"	293.4	+ 9.2
1982	"	299.3	+ 2.0
1983	"	303.1	+ 1.3
1984	"	310.3	+ 2.4
1985	"	308.7	− 0.5
1986	"	299.8	− 3.6
July 1987	"	310.2	

Source: U.S. Department of Labor

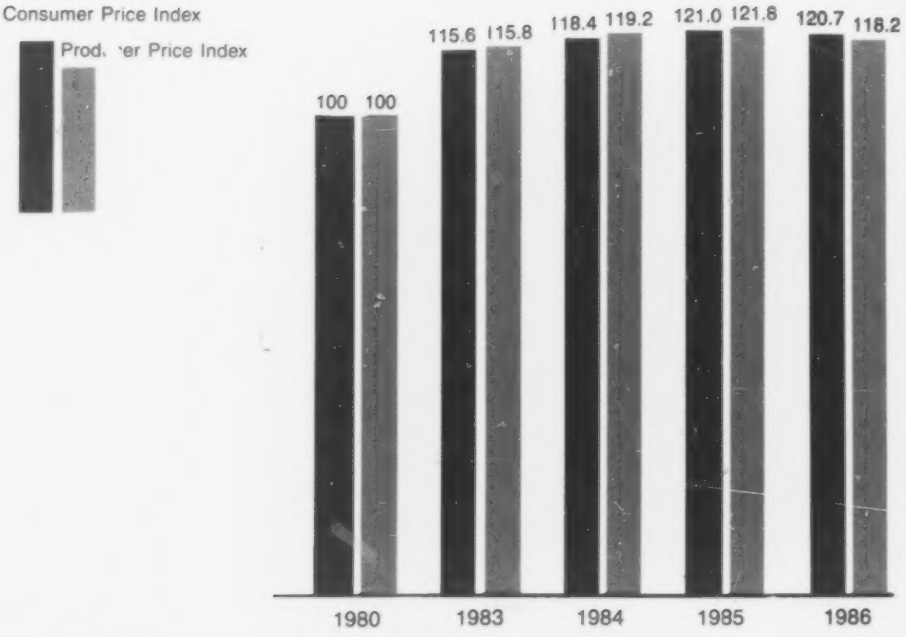
U.S.A. Gross Hourly Earnings (in $)

	– average – Manufacturing Industry
1982	8.49
1983	8.83
1984	9.19
1985	9.53
1986	9.73
July 1987	9.88

Source: U.S. Department of Commerce

GERMANY

PRICES AND WAGES



Wages and inflation (1980 = 100)

Source: Statistisches Bundesamt, Germany
Deutsche Bundesbank, Germany

CONSUMER PRICE INDEX

Period		1980 = 100	Change from previous year %
1975	average	82.0	+ 5.9
1976	"	85.6	+ 4.4
1977	"	88.7	+ 3.6
1978	"	91.1	+ 2.7
1979	"	94.9	+ 4.2
1980	"	100	+ 5.4
1981	"	106.3	+ 6.3
1982	"	111.9	+ 5.3
1983	"	115.6	+ 3.3
1984	"	118.4	+ 2.4
1985	"	121.0	+ 2.2
1986	"	120.7	− 0.2
1987	Jan "	120.6	− 0.8
	Feb. "	120.7	− 0.5
	March "	120.7	− 0.2
	April "	121.0	+ 0.1
	May "	121.1	+ 0.2
	June "	121.3	+ 0.2
	July "	121.3	+ 0.7
	Aug "	121.2	+ 0.8

Source: Statistisches Bundesamt, Germany

PRODUCER PRICE INDEX

Period		1980 = 100	Change from previous year %
1975	average	82.3	+ 4.6
1976	"	85.4	+ 3.8
1977	"	87.7	+ 2.7
1978	"	88.7	+ 1.1
1979	"	93.0	+ 4.8
1980	"	100.0	+ 7.5
1981	"	107.8	+ 7.8
1982	"	114.1	+ 5.8
1983	"	115.8	+ 1.5
1984	"	119.2	+ 2.9
1985	"	121.8	+ 2.2
1986	"	118.2	− 3.0
1987	Jan. "	115.9	− 4.4
	Feb. "	115.5	− 4.2
	March "	115.4	− 3.5
	April "	115.1	− 3.6
	May "	115.2	− 2.9
	June "	115.3	− 2.7
	July "	115.6	− 1.8
	Aug. "	115.2	− 1.4

Source: Statistisches Bundesamt, Germany

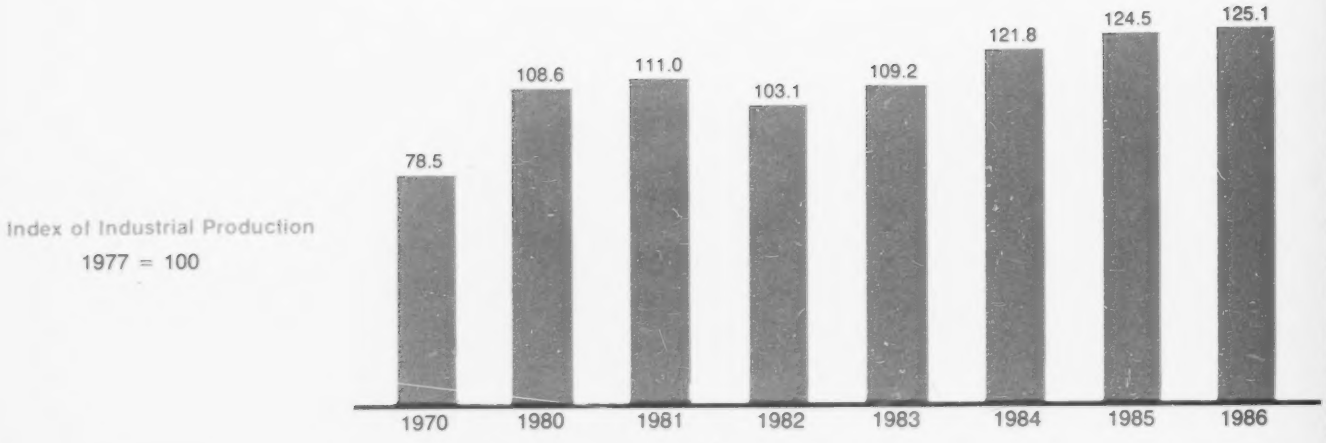
Germany Gross Hourly Earnings
(in DM)

	– average – Manufacturing Industry
1983	15.41
1984	15.77
1985	16.39
1986	16.99
1987 Jan.	17.32
1987 April	17.56

Source: Statistisches Bundesamt, Germany

U.S.A.

INDUSTRIAL PRODUCTION



Source: U.S. Department of Commerce

Percentage change
from preceding year and quarter

1979	3.9
1980	-1.9
1981	2.2
1982	-7.1
1983	5.9
1984	11.5
1985	2.2
1986	0.5

Source: U.S. Department of Commerce

U.S.A.
Capacity Utilization Rate
(Percent; Industry)

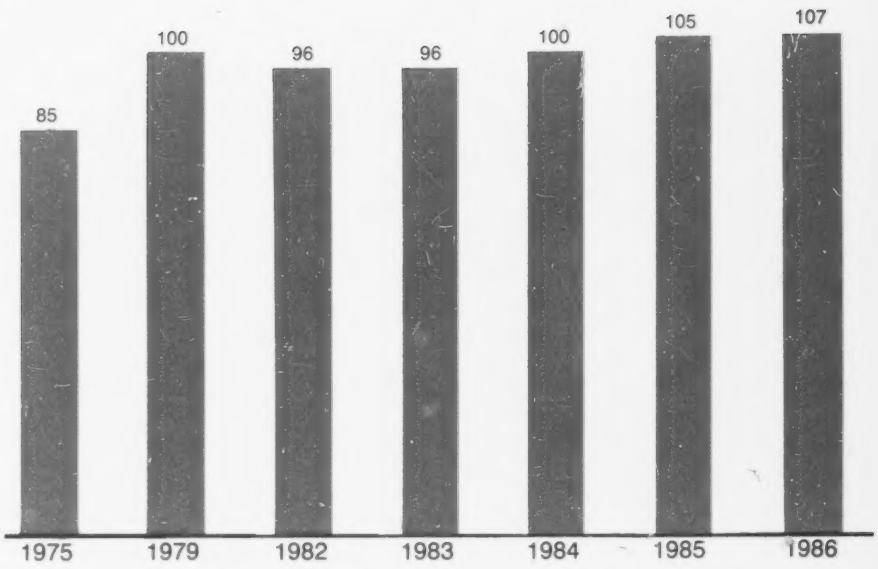
1970	79.2
1975	79.2
1980	79.2
1981	78.3
1982	70.3
1983	74.0
1984	80.8
1985	80.3
1986	80.1
December 1987	82.1

Source: Federal Reserve Board

GERMANY

INDUSTRIAL PRODUCTION

Index of Industrial Production:
Index: 1980 = 100



Source: Organization for Economic Cooperation and Development (OECD)

Percentage change
from preceding year and quarter

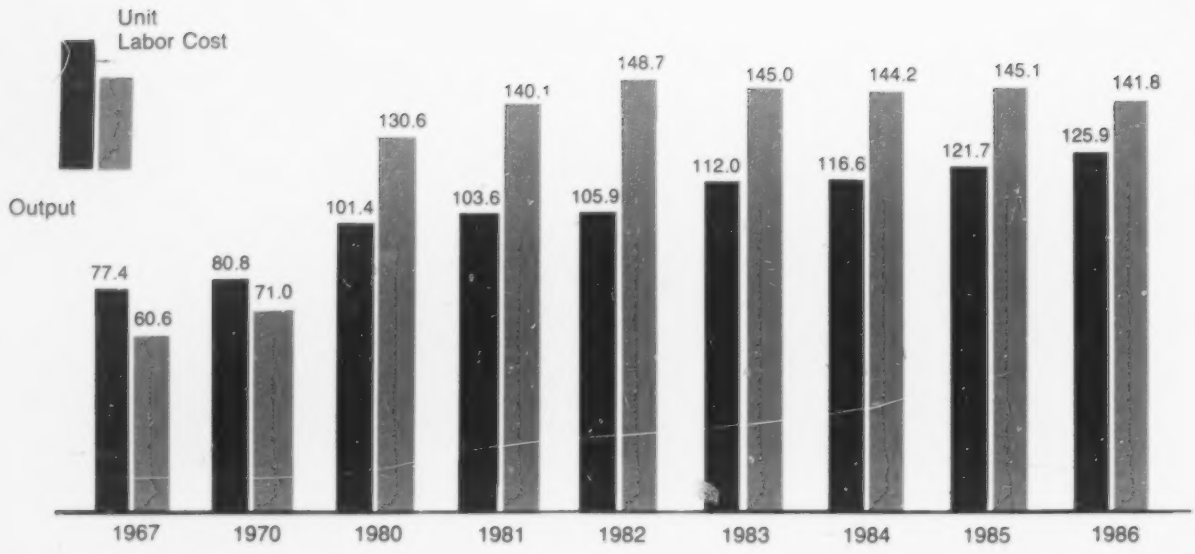
1978	+1.5
1979	+5.0
1980	+0.3
1981	-1.7
1982	-3.0
1983	+0.8
1984	+3.4
1985	+5.3
1986	+2.0

Source: Organization for Economic Cooperation and Development (OECD)

U.S.A.

PRODUCTIVITY AND UNIT LABOR COST IN MANUFACTURING

Output and Unit Labor Cost per Hour
Index: 1977 = 100
(on $ basis)



Source: U.S. Department of Labor

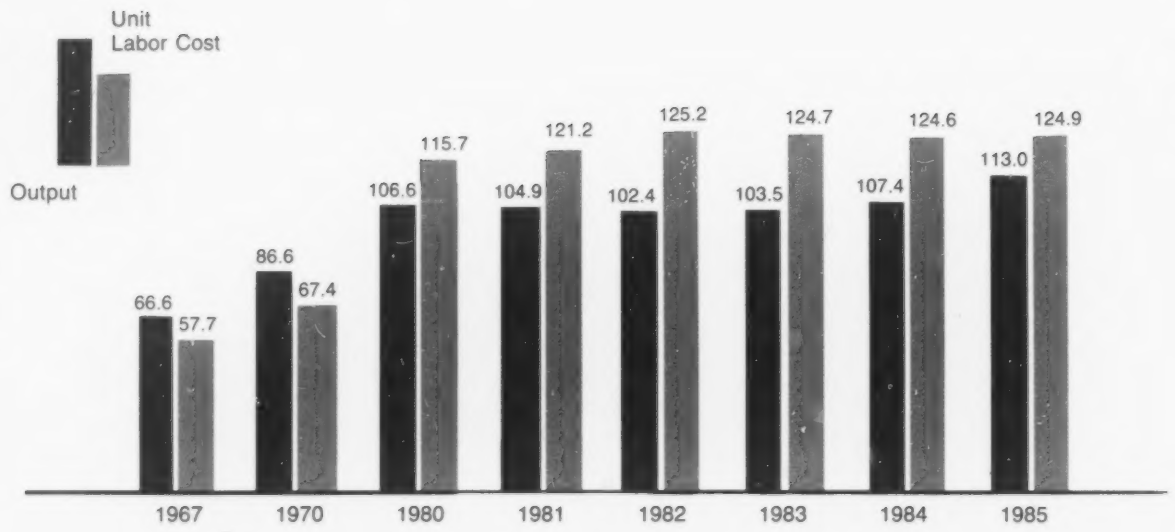
Period	Unit Labor Cost in $	Output per Man-Hour	Hourly Compensation
1967	60.6	77.4	47.0
1970	71.0	80.8	57.6
1979	117.0	101.4	118.8
1980	130.6	101.4	132.7
1981	140.1	103.6	145.8
1982	148.7	105.9	158.0
1983	145.0	112.0	163.4
1984	144.2	116.6	169.1
1985	145.1	124.2	176.9
1986	—	128.8	182.7

Source: U.S. Department of Labor

GERMANY

PRODUCTIVITY AND UNIT LABOR COST IN MANUFACTURING

Output and Unit Labor Cost per Hour
Index: 1977 = 100
(on DM basis)



Source: U.S. Department of Labor

Period	Unit Labor Cost in $	Output per Man-Hour	Hourly Compensation
1967	57.7	66.6	34.7
1970	67.4	86.6	48.0
1978	104.5	101.8	107.8
1979	107.3	106.6	116.1
1980	115.7	106.6	125.6
1981	121.2	104.9	134.5
1982	125.2	102.4	141.0
1983	124.7	103.5	148.4
1984	124.6	107.4	155.3
1985	124.9	113.0	164.7

Source: U.S. Department of Labor

U.S.A./GERMANY

GERMAN-U.S. TRADE

Major Items of U.S.–German Trade (in mil.$)

U.S. Exports to Germany				U.S. Imports from Germany		
1980	1985	1986		1980	1985	1986
951.1	378.6	447.9	Food and live animals	168.8	321.8	384.4
31.2	7.8	9.8	Meat and prep.	2.5	8.1	5.8
6.4	2.0	3.39	Dairy products and eggs	16.0	23.5	29.2
19.8	8.0	7.8	Fish and prep.	1.5	3.4	4.7
223.8	20.4	18.67	Cereals and prep.	6.7	17.1	21.3
291.3	152.8	168.5	Fruits and vegetables	34.3	91.7	94.5
361.6	166.0	207.4	Animal feeding-stuffs	6.6	7.5	10.7
3.1	1.6	2.77	Coffee, cocoa, spices and prep.	69.3	109.1	151.1
246.0	261.4	256.5	Beverages and tobacco	145.5	241.5	229.0
—	—	—	Beer	43.4	—	130.5
2.0	—	1.02	Wine	97.3	—	86.6
9.7	9.3	8.7	Alcoholic beverages, distilled	—	232.9	5.9
234.1	251.1	550.4	Tobacco, raw and manufactured	2.1	5.1	—
1,500.3	824.2	884.6	Crude materials, inedible, exc. fuel	130.1	119.2	103.7
102.9	38.5	39.9	Hides, skins and furskins undressed	3.4	3.4	3.1
398.5	—	230.3	Soybeans	—	—	—
66.9	49.8	60.2	Rubber, incl. synthetic and reclaimed	3.3	18.6	17.6
134.6	58.9	70.94	Wood, lumber and cork	0.5	2.1	2.7
202.9	193.6	218.2	Pulps and waste paper	—	0.5	0.45
101.6	92.8	98.4	Raw textile fibers and their waste	11.7	22.1	16.8
84.7	45.0	50.9	Crude fertilizers and minerals	8.6	9.2	11.8
330.3	110.1	67.7	Metalliferous ores and metal scrap	88.5	33.4	16.9
112.3	70.2	—	Nonferrous metal scrap	64.9	16.8	—
18.4	21.5	—	Vegetable materials, crude	1.8	14.0	—
216.4	98.3	78.5	Mineral fuels and lubricants	26.3	96.9	71.8
136.5	54.7	40.1	Coal, coke, briquettes, lignite, peat	4.4	0.01	.19
79.7	41.6	38.2	Petroleum and petroleum products	21.9	96.8	71.6

Source: U.S. Department of Commerce

Continued

Major Items of U.S.–German Trade (in mil.$) (continued)

U.S. Exports to Germany				U.S. Imports from Germany		
1980	1985	1986		1980	1985	1986
35.8	12.5	5.0	Oils and fats, animal and vegetable	2.5	3.8	0.62
850.8	1,047.8	1,180.3	Chemicals	1,019.2	1,496.5	1,850.0
396.8	520.5	492.72	Organic and inorganic chemicals	512.0	739.5	958.6
25.9	22.3	22.9	Essent. oils, perfume materials, soaps	27.6	68.1	83.1
23.4	18.3	20.0	Dyeing, tanning and coloring materials	97.2	168.8	221.5
133.1	215.2	295.0	Medicinal and pharmaceutical products	92.1	135.9	166.1
142.9	155.9	205.0	Synthetic resins and plastic materials	149.4	206.3	246.9
990.9	457.9	567.3	Manufactured goods by chief material	1,493.0	2,572.4	2,671.3
24.6	19.3	13.2	Leather	18.4	34.9	34.4
9.8	9.5	11.25	Tires and tubes for tires	82.9	79.5	82.9
127.8	73.4	77.41	Textile yarn and fabrics	90.7	221.4	–
77.1	40.3	56.3	Wood and cork	6.8	23.2	20.6
142.9	28.7	48.8	Paper and paperboard	21.0	160.8	172.9
47.2	28.8	23.6	Iron and steel	557.1	952.1	–
295.7	47.1	48.21	Nonferrous metals	202.4	326.2	–
180.7	142.5	156.9	Metal manufactures	284.1	412.1	–
49.0	28.1	25.8	Glass, Glassware, Pottery	151.3	209.1	233.7
3,916.4	4,399.1	4,986.2	Machinery and transport equipment:	7,562.9	13,115.0	16,863.0
987.0	144.7	149.3	Electrical machines and apparatus	644.7	300.3	385.1
782.0	802.8	–	Transport equipment	3,961.6	170.0	–
74.2	65.7	66.0	–Metalworking machinery	334.2	419.9	578.8
1,083.4	1,399.5	1,568.4	–Office machines	195.1	124.5	143.6
50.7	20.6	22.0	–Agricultural machines	199.4	58.1	67.4
42.0	28.1	28.8	–Textile and leather machinery	249.2	287.2	449.3
291.5	211.6	225.3	–Other machs. for spec. industries	679.1	539.3	786.7
212.8	158.8	146.4	–Telecommunications apparatus	84.4	71.0	78.3
97.2	139.0	161.4	–El. medical and radiolog. apparatus	113.9	359.4	456.3
230.3	282.9	243.9	–Road motor vehicles and parts	3,889.0	7,363.8	8,303.0
533.0	794.6	1,015.0	–Aircraft and spacecraft and parts	48.8	109.2	124.7
1,631.0	886.0	1,120.6	Miscellaneous manufactured articles:	890.6	1,693.3	2,215.8
72.0	8.0	9.6	Clothing and accessories	22.9	10.1	12.7
4.5	2.6	5.0	Footwear	16.2	21.8	24.9
482.6	488.7	462.7	Prof., scientific and controlling instruments	277.4	467.3	436.9
210.6	131.0	135.9	Photo equipment, photographic supplies	52.7	76.7	153.9
3.4	1.8	2.3	Watches and clocks	52.0	71.0	82.5
68.1	66.7	80.7	Musical instruments, parts, accessories	38.5	10.1	166.0
26.0	28.8	32.3	Printed matter	36.9	70.7	83.1
52.3	52.3	56.3	Rubber and plastic manufactures	116.1	208.3	252.3
116.1	34.3	54.2	Toys, sporting goods, baby carriages	38.6	74.0	94.2
526.6	289.3	75.8	Artworks, collectors pieces, antiques, jewelry	83.8	115.3	151.9
256.5	194.4	253.0	Items not classified by kind	242.3	578.8	731.0

Source: U.S. Department of Commerce

U.S.A.

DIRECT INVESTMENT

U.S. Direct Investment Abroad (in mil. $)
(annual rates)

By Country	1970	1980	1981	1982	1983	1984	1985	1986
United Kingdom	8,016	28,460	30,316	29,914	30,851	28,635	33,963	34,990
Japan	1,482	6,225	6,762	6,928	8,059	7,920	9,095	11,333
Germany	4,313	15,415	15,841	15,860	16,008	14,794	16,746	20,344
Canada	21,015	45,119	47,073	46,183	47,553	46,830	46,435	50,178
Italy	1,464	5,397	5,275	4,642	4,790	4,592	5,644	6,987
France	2,643	9,347	9,132	7,807	6,900	6,224	7,835	9,471
Switzerland	2,631	11,280	12,499	13,336	15,065	14,865	16,230	17,458

Source: U.S. Department of Commerce

Foreign Direct Investment in the U.S.A. (in mil. $)
(annual rates)

By Country	1970	1980	1981	1982	1983	1984	1985	1986
United Kingdom	4,127	14,105	18,471	28,447	32,152	38,387	43,766	51,397
Germany	680	7,596	9,459	9,850	10,845	12,330	14,417	17,356
Japan	229	4,723	7,688	9,679	11,336	16,044	19,116	23,433
Canada	3,117	12,162	11,870	11,708	11,434	15,286	16,678	18,312

Source: U.S. Department of Commerce

DIRECT INVESTMENT

German Direct Investment Abroad (in mil. DM)
(annual rates)

By country	1977	1980	1981	1982	1983	1984	1985	1986
United States	1,338.8	3,380.1	3,402.8	3,274.5	2,748.8	3,257.5	7,665.4	4,414.3
Belgium/Luxemburg	478.4	1,028.1	1,020.5	749.4	621.7	474.7	562.3	394.5
France	413.4	453.7	621.6	304.4	383.2	494.1	494.5	485.7
Brazil	587.8	362.7	731.0	603.2	528.6	130.2	- 69.2	-153.1
Switzerland	181.6	542.9	367.0	307.4	614.1	211.7	38.8	529.9
Canada	371.0	421.5	479.0	382.3	-14.2	208.0	36.2	213.9
United Kingdom	150.6	171.0	295.0	1,050.9	1,058.0	1,091.1	2,615.6	806.5
Spain	71.9	228.2	91.0	304.4	448.4	533.2	52.2	813.0
Netherlands	222.1	254.8	60.7	556.1	-836.2	579.5	- 33.7	2,009.3
Italy	75.6	212.8	164.4	269.3	162.1	207.9	1,221.7	-238.5
By industry	**1977**	**1980**	**1981**	**1982**	**1983**	**1984**	**1985**	**1986**
Chemicals, medical, pharmac. products	663.4	835.7	1,546.2	755.6	1,117.9	925.4	4,149.1	1,570.4
Finance	594.6	968.2	1,884,7	905.3	1,730.6	1,321.8	2,814.8	1,598.7
Electrical engineering	670.5	605.0	477.6	939.2	648.7	757.8	876.4	1,510.9
Motor vehicles	438.6	897.9	1,339.1	1,004.6	1,368.6	1,182.8	1,340.6	2,122.6
Mechanical engineering	272.8	807.8	556.6	850.7	1,048.6	416.5	370.7	592.2
Iron & Steel	301.3	224.0	-8.9	663.9	-671.6	260.0	67.1	36.2
Petroleum	344.6	301.9	544.2	786.3	400.8	425.0	43.6	4.4
Insurance	206.8	233.7	156.2	671.0	247.9	276.8	2,052.2	872.7
Real estate	100.3	151.1	235.7	141.7	65.1	267.9	42.2	-229.9

Source: Deutsche Bundesbank, Germany

Foreign Direct Investment in Germany (in mil. DM)
(annual rates)

By country	1977	1980	1981	1982	1983	1984	1985	1986
United States	1,155.9	172.2	405.5	1,220.9	1,236.2	-132.1	572.1	549.8
Switzerland	700.8	88.5	670.2	489.8	901.8	285.9	536.9	975.2
United Kingdom	361.9	908.8	848.4	663.9	223.3	1,591.4	618.8	1,724.8
Netherlands	467.8	574.0	725.7	306.7	-753.9	86.0	773.1	445.3
France	305.6	175.1	281.3	429.7	352.7	359.0	93.4	424.3
Belgium/Luxemburg	245.1	36.1	214.0	200.9	124.3	-24.6	-18.0	67.3
Japan	135.0	155.3	206.2	262.0	263.4	351.8	588.4	1,256.6
Sweden	34.3	104.7	87.2	1.9	272.0	1.5	7.6	-3.9
Italy	66.5	32.0	43.0	15.1	-46.4	435.4	160.8	146.3
Austria	20.1	30.0	59.0	63.9	129.9	167.6	14.6	97.7
By industry	**1977**	**1980**	**1981**	**1982**	**1983**	**1984**	**1985**	**1986**
Holding companies	278.7	15.2	450.6	1,541.5	416.2	445.8	1,380.0	2,158.6
Petroleum	374.5	298.4	228.6	373.6	-139.5	377.5	48.9	875.7
Finance	1,103.1	603.0	712.4	535.9	178.1	1,407.2	1,346.6	2,146.5
Chemicals	157.5	950.9	476.0	-118.0	434.1	82.2	-296.2	298.6
Electrical engineering	332.4	31.1	469.7	290.0	452.9	39.1	189.4	534.3
Mechanical engineering	323.8	213.6	422.4	456.8	408.8	338.2	59.6	201.3
Motor vehicles	144.4	26.3	361.3	72.2	501.8	271.0	139.0	41.1
Food	-80.4	-222.4	-101.7	6.9	207.3	83.6	9.1	32.5
Nonferrous metals	39.7	80.2	173.0	6.5	583.6	79.8	61.3	-95.4
Iron & Steel	103.8	-29.3	112.4	-275.8	-1,188.7	-126.5	-39.2	15.1

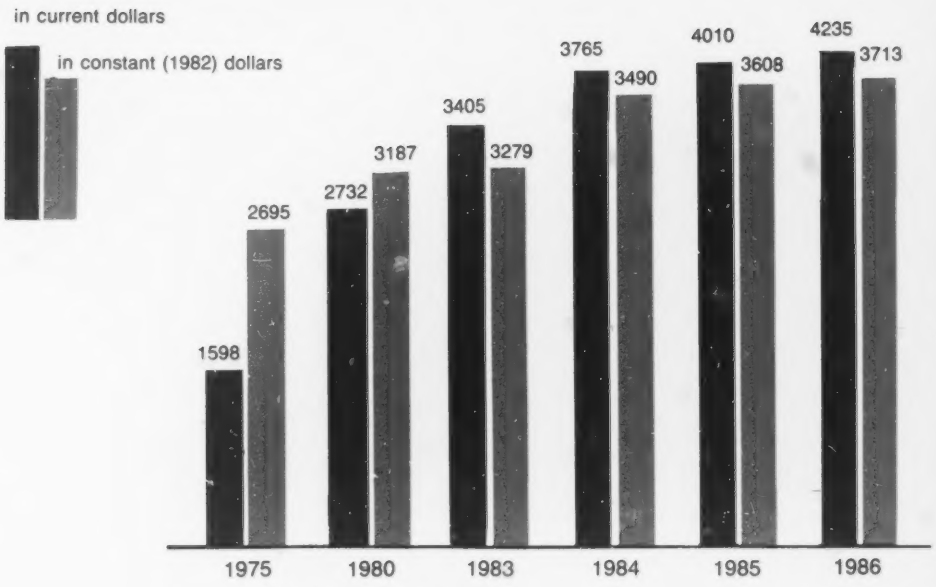
Source: Deutsche Bundesbank, Germany
Bundesministerium für Wirtschaft

U.S.A.

GROSS NATIONAL PRODUCT

(in bil. $)

GNP Total



Source: U.S. Department of Commerce

GNP by Type of Expenditure
(at current prices)

Period	Gross National Product	% chg. from yr. earlier	Personal Consumption	Government Consumption	Gross Private Domestic Investment	Net Exports of Goods and Services
1972	1,212.8	10.0	757.6	250.0	202.0	3.2
1973	1,359.3	12.1	837.2	266.5	238.8	16.8
1974	1,472.8	8.3	916.5	299.1	240.8	16.3
1975	1,598.4	8.5	1,012.8	335.0	219.6	31.1
1976	1,782.8	11.5	1,129.3	355.9	277.7	18.8
1977	1,990.5	11.7	1,257.3	387.3	344.1	1.9
1978	2,249.7	13.0	1,403.5	425.2	416.8	4.1
1979	2,508.2	11.5	1,566.8	467.8	454.8	18.8
1980	2,732.0	8.9	1,732.6	530.3	437.0	32.1
1981	3,052.6	11.7	1,915.1	588.1	515.5	33.9
1982	3,166.0	3.7	2,050.1	641.7	447.3	26.3
1983	3,405.7	7.6	2,234.5	675.0	502.3	-6.1
1984	3,765.0	10.5	2,428.2	733.4	662.1	-58.7
1985	4,010.3	6.5	2,629.4	818.6	641.6	-79.2
1986	4,235.0	5.6	2,799.8	869.7	671.0	-105.5

Source: U.S. Department of Commerce

GNP by Type of Expenditure
(at constant 1972 prices)

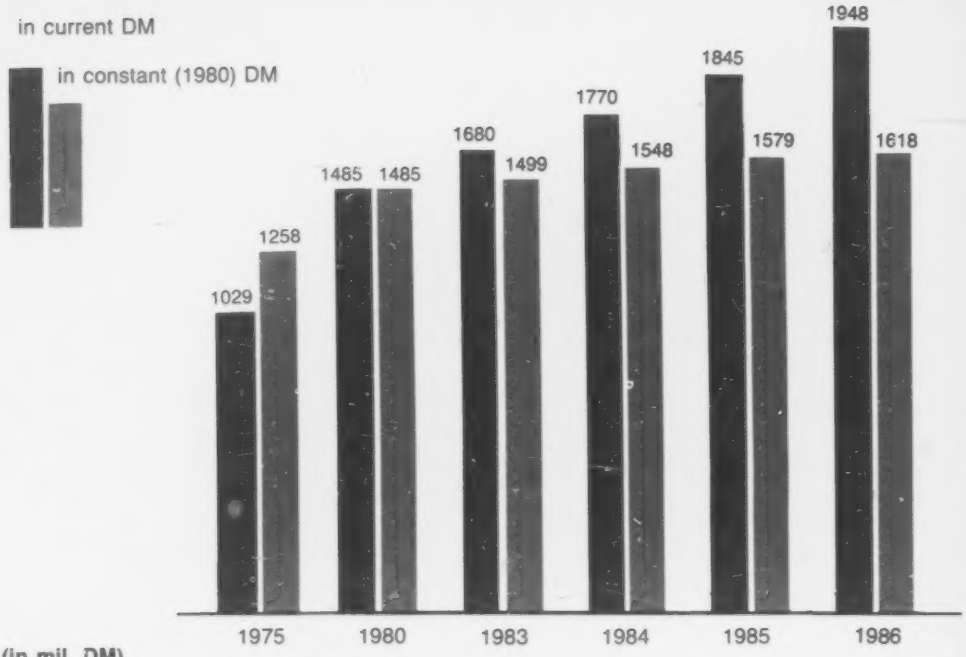
Period	Gross National Product	% chg. from yr. earlier	Personal Consumption	Government Consumption	Gross private domestic investment			Net Exports of Goods and Services
					Nonresidential fixed	Residential fixed	Change in business inventories	
1972	2,608.5	5.0	1,621.9	570.7	277.0	166.6	21.8	-49.5
1973	2,774.1	5.2	1,689.6	565.3	317.3	163.4	40.0	-31.5
1974	2,729.3	-.5	1,674.0	573.2	317.8	130.2	33.3	0.8
1975	2,695.0	-1.3	1,711.9	580.9	281.2	114.9	-12.8	18.9
1976	2,826.7	4.9	1,803.9	580.3	290.9	140.8	22.1	-11.0
1977	2,958.6	4.7	1,883.8	589.1	324.0	168.1	29.1	-35.5
1978	3,115.2	5.3	1,961.0	604.4	362.1	178.0	36.8	-26.8
1979	3,192.4	2.5	2,004.4	609.1	389.4	170.8	15.0	3.6
1980	3,187.1	-.2	2,000.4	620.5	379.2	137.0	-6.9	57.0
1981	3,248.8	1.9	2,024.2	629.7	395.2	126.5	23.9	49.4
1982	3,166.0	-2.5	2,050.7	641.7	366.7	105.1	-24.5	26.3
1983	3,279.1	3.6	2,146.0	649.0	361.2	149.3	-6.4	-19.9
1984	3,501.4	6.5	2,249.3	677.7	425.2	170.6	62.3	-84.0
1985	3,607.5	3.0	2,352.6	726.9	454.1	174.6	7.4	-106.2
1986	3,713.3	2.9	2,450.5	754.5	443.8	196.4	13.8	-145.8

*Source: U.S. Department of Commerce *Note: For 1984, 1985, and 1986 GNP in constant (1982) dollars*

GERMANY

GROSS NATIONAL PRODUCT
(in mil. DM)

GNP Total



Source: Statistisches Bundesamt, Germany

GNP by Type of Expenditure **(in mil. DM)**
(at current prices)

Period	Gross National Product	% chg. from yr. earlier	Personal Consumption	Government Consumption	Investment	Net Exports of Goods and Services
1960	303.0	11.7	171.8	40.5	73.6	60.7
1970	675.7	13.0	368.9	106.5	172.1	152.9
1974	985.6	7.3	533.7	190.2	212.7	279.0
1975	1,029.4	4.4	585.3	210.0	209.4	271.2
1976	1,126.2	9.4	632.5	221.7	225.7	309.0
1977	1,199.2	6.5	683.2	235.0	242.4	325.8
1978	1,291.6	7.7	728.9	252.9	266.0	344.7
1979	1,396.6	8.1	785.0	273.3	303.4	377.4
1980	1,485.2	6.3	840.8	297.8	335.8	422.3
1981	1,545.1	4.0	887.9	318.2	335.2	482.1
1982	1,597.1	3.4	918.1	326.2	326.9	517.5
1983	1,680.4	5.2	964.2	336.2	343.8	524.8
1984	1,769.9	5.3	1,003.6	350.2	354.6	590.8
1985	1,844.9	4.2	1,042.6	365.6	360.8	650.2
1986	1,948.0	5.6	1,081.9	381.7	376.8	639.8
1987 I	968.1	4.4	535.5	183.5	172.9	309.7

Source: Statistisches Bundesamt, Germany

GNP by Type of Expenditure
(at constant 1980 prices)

Period	Gross National Product	% chg. from yr. earlier	Personal Consumption	Government Consumption	Investment	Net Exports of Goods and Services
1960	731.7	—	370.6	137.5	189.9	120.9
1970	1,134.0	5.0	606.8	211.9	291.9	248.4
1974	1,276.5	0.2	691.5	253.4	286.4	348.0
1975	1,258.0	-1.4	713.9	262.8	271.3	324.6
1976	1,328.2	5.6	740.4	266.8	281.0	356.7
1977	1,363.4	2.7	771.8	270.4	291.1	368.5
1978	1,407.9	3.3	801.5	280.8	304.7	383.7
1979	1,463.6	4.0	830.4	290.3	326.7	401.0
1980	1,485.2	1.5	840.8	297.8	335.8	422.3
1981	1,485.3	0.0	836.4	303.3	319.7	456.7
1982	1,471.0	-1.0	825.2	300.7	302.9	471.5
1983	1,498.9	1.9	839.6	301.4	312.4	469.0
1984	1,548.1	3.3	852.3	308.8	314.9	511.1
1985	1,579.0	2.0	867.5	315.3	315.1	548.0
1986	1,617.7	2.5	904.5	322.4	324.9	547.2
1987 I	795.2	1.5	445.7	159.1	147.5	268.1

Source: Statistisches Bundesamt, Germany

GERMANY/ U.S.A.

CURRENCY EXCHANGE RATES

Average Exchange Rates
(value of $1.00 in DM)

Annual Average	
1975	DM 2.46
1977	2.32
1978	2.01
1979	1.83
1980	1.82
1981	2.25
1982	2.43
1983	2.56
1984	2.55
1985	2.82
1986	2.95

Source: Deutsche Bundesbank

Monthly Average		
1986	Jan.	DM 2.4438
	Feb.	2.3341
	March	2.2638
	Apr.	2.2745
	May	2.2282
	June	2.2365
	July	2.1532
	Aug.	2.0636
	Sept.	2.0401
	Oct.	2.0047
	Nov.	2.0264
	Dec.	1.9916
1987	Jan.	1.8581
	Feb.	1.8265
	March	1.8339
	Apr.	1.8110
	May	1.7863
	June	1.8184
	July	1.8470
	Aug.	1.8581

Source: Deutsche Bundesbank

Ratio of Savings to Disposable Personal Income
(percent)
U.S.A.

1980	7.1
1981	7.5
1982	6.8
1983	5.4
1984	6.3
1985	5.1
1986	4.3

Source: U.S. Department of Commerce, International Trade Administration

Ratio of Savings to Disposable Personal Income
(percent)
Germany

1980	14.1
1981	14.7
1982	13.8
1983	12.5
1984	13.0
1985	12.7
1986	13.4

Source: Deutsche Bundesbank

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Bayer	Mobay Chemical	100	5,929
	Miles Laboratories	100	13,000
	Helena Chemical	100	773
	Agfa-Gevaert	100	797
	Other Companies	100	3,000
Bertelsmann AG	Bertelsmann, Inc.	100	10,320
	Bantam Doubleday Dell Publishing Group	100	
	Bertelsmann Music Group	100	
	Bertelsmann Printing and Manufacturing Corp.	100	
	Doubleday Book and Music Clubs	100	
	Doubleday Book Shops	100	
	Gruner & Jahr USA Publishing	100	
Volkswagenwerk AG	Volkswagen of America	100	9,000
	Royal Business Machines	66	n.a.
BASF	BASF Wyandotte	100	3,900
	Basfische Corp.	100	4,200
	BASF Systems	100	1,150
	Fritzsche Dodge & Olcott	100	850
	Knoll Pharmaceutical	100	520
Hoechst	Hoechst-Celanese	74.9	23,000
Siemens	Siemens Communication	100	981
	Siemens Components	100	1,910
	Siemens Medical Systems	100	3,159
	Siemens-Allis	88	7,700
	Other Companies	100	3,065
Thyssen Group	Budd Co.	100	n.a.
Daimler-Benz Group	Freightliner	100	n.a.
Henkel KGaA	Clorox	30	5,600
	Henkel Corp.	100	2,500
	Amchem Products	100	2,500
Tengelmann Group	Great A&P Tea	50.5	72,000
Franz Haniel & Cie	Scrivner Inc.	100	4,000
Otto Versand	Spiegel Inc.	100	5,000

ACKNOWLEDGEMENTS

PHOTOS: Airbus Industrie of North America, pp. 21, 23, 24, 28, 30; American Council on Germany, p. 107; Audi, pp. 129, 130, 131, 132, 133; Bechtle & Co., p. 123; Berlin Economic Development Corp., p. 153; Bundesbildstlle-Bonn, p. 87; Chase Manhattan Bank, pp. 61, 62; DG Bank, pp. 73, 75; European Community Information Service, p. 113; Ford Motor Co., pp. 14, 17, 18; Freudenberg & Co., pp. 49, 50; German Information Center, pp. 54, 74, 81, 83, 92, 94, 100, 101, 102, 105, 108, 109, 110, 115, 116, 117, 118, 146, 147, 148, 154, 155, 156; Henkel, pp. 39, 40, 41, 42, 46; Institute for International Economics, p. 79; Jones Group, pp. 33, 34, 35, 36; Mercedes-Benz, p. 99; Morgan Guaranty Trust Co., p. 91; N.Y. Times/Paul Hosefros, p. 139; N.Y. Stock Exchange, p. 100; Peat Marwick Main & Co., p. 145; Price Waterhouse, p. 137; Siemens Capital Corp., pp. 53, 55, 58, 59; Time/Terry Ashe, p. 141; U.S. Dept. of the Treasury p. 140.

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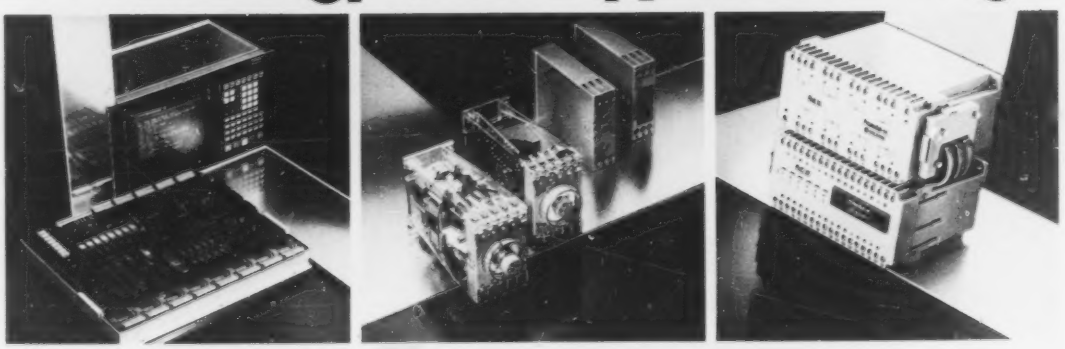

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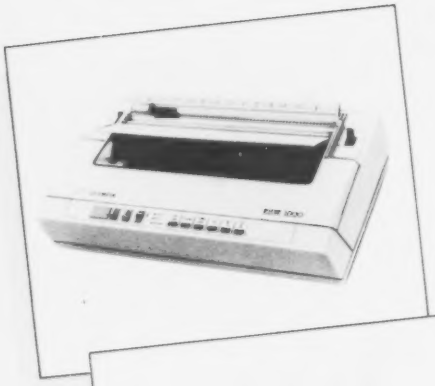

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